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Railway Age

Founded in 1856

The flanged wheel on the steel rail

Carries the output of farm, factory, and mine—at an average charge no higher now than before the war

● Remember this picture of the wheel and the rail . . . the unique combination which makes it possible for railroads to run trains of cars . . . the only means of transportation with the capacity to meet America's major needs . . . in peace as well as in war.

Flanged wheels on steel rails, plus a vast volume of traffic, made it possible for railroads—despite steep increases in wages and costs in the past five years – to haul freight at charges which generally are no higher now than before the war. It still costs, on an average, less than one cent for hauling a ton of freight a mile.

Railroad charges depend upon both operating costs and traffic volume – but whatever changes the future may bring, the flanged wheel on the steel rail will still be America's basic reliance for dependable transportation at the lowest possible charge.

AMERICAN RAILROADS

UNIT TRUCK

A Pictorial History of Freight Progress

1940

730

CAR SETS IN USE

1943

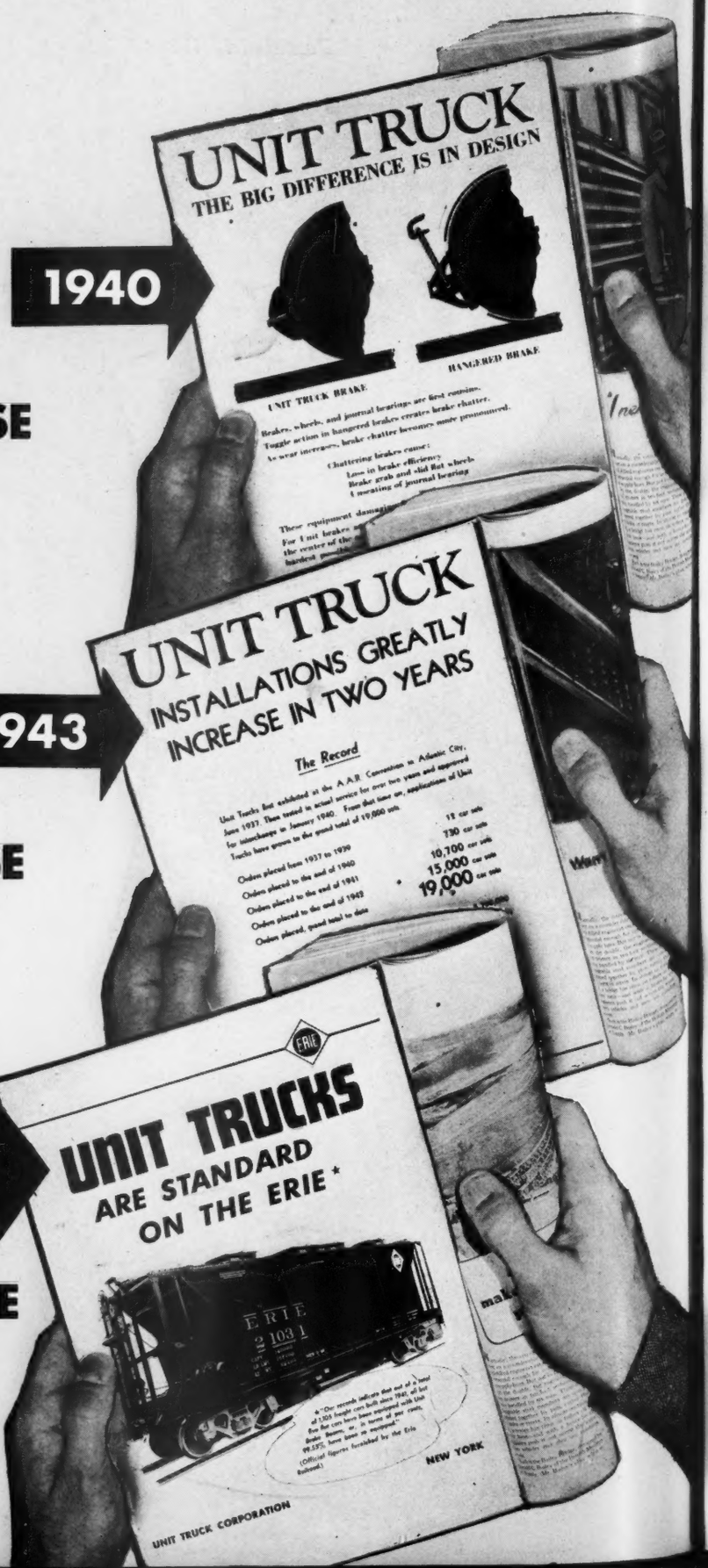
20,271

CAR SETS IN USE

1946

37,979

CAR SETS IN USE



Railway Age

With which are incorporated the Railway Review, the Railway Gazette, and the Railway Age-Gazette. Name registered in U. S. Patent Office.

Vol. 120 May 18, 1946 No. 20

PUBLISHED EACH SATURDAY BY THE SIMMONS-BOARDMAN PUBLISHING CORPORATION, 1309 NOBLE STREET, PHILADELPHIA 23, PA., WITH EDITORIAL AND EXECUTIVE OFFICES AT 30 CHURCH STREET, NEW YORK 7, N. Y., AND 105 W. ADAMS STREET, CHICAGO 3, ILL.

WASHINGTON 4, D. C.: 1081 NATIONAL PRESS BUILDING—CLEVELAND 13: TERMINAL TOWER—SEATTLE 1: 1033 HENRY BUILDING—SAN FRANCISCO 4: 300 MONTGOMERY STREET, ROOMS 805-806—LOS ANGELES 14: 530 WEST 6th STREET—DALLAS 1: POST OFFICE BOX #1808.

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SUBSCRIPTIONS, INCLUDING 52 REGULAR WEEKLY ISSUES, AND SPECIAL DAILY EDITIONS PUBLISHED FROM TIME TO TIME IN NEW YORK OR IN PLACES OTHER THAN NEW YORK, PAYABLE IN ADVANCE AND POSTAGE FREE. UNITED STATES, U. S. POSSESSIONS AND CANADA: 1 YEAR, $6.00; 2 YEARS, $10.00; FOREIGN COUNTRIES, NOT INCLUDING DAILY EDITIONS: 1 YEAR, $8.00; 2 YEARS, $14.00. SINGLE COPIES, 25 CENTS EACH. H. E. McCANDLESS, CIRCULATION MANAGER, 30 CHURCH STREET, NEW YORK 7.

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★

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Freight Progress at a Glance

PEACE: This is the first peace-time Freight Progress Issue since Pearl Harbor, but the aftermath of war continues to perplex shippers and carriers alike. Progress has been made toward restoring the service and efficiency that the railroads strive to give, and their customers rightfully demand, but performance, in that respect, has not yet fully reached the peak that it was reasonable to expect when hostilities ceased. While freight traffic has dropped below war-time levels, it has taxed the railroads' car supply, despite major and minor strikes that have delayed the reconversion of industry and retarded the recuperation of commerce from the dislocations of war. These pages tell what the railroads have done already to prepare themselves to meet the challenge of the future, and what they intend to do, to the full limit of their resources, to capitalize on their opportunities to serve their customers more successfully than ever before.

●

SHIPPERS WANT SERVICE: The average shipper frequently is more concerned about getting prompt and dependable freight service than about the exact charge for it, the N.I.T. League's Edward F. Lacey points out in an article in which he comments on some of the ways in which shippers would like to see the service they get further improved. Better protection of lading, especially where loads are not heavy enough to get the full advantage of car springs and shock-absorbing devices; more through merchandise cars and speedier handling at terminals; fast schedules regularly maintained; more run-down cars replaced with new equipment—these are some of the matters that he would like to see attended to promptly. He expresses confidence in the ability of the carriers and their customers to work together in peace, as they have in war, to secure efficient and economical service.

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NEW TRAFFIC SOURCES: To a considerable extent the volume of freight handled by the railroads is going to depend on the kind of service they offer, in comparison to that provided by other forms of transportation. But the railroads can do more than handle efficiently the traffic that comes their way; they can create more traffic. This is, in part, the task of industrial, agricultural, forestry and other specialized departments set up to foster businesses that already exist and to encourage the establishment and development of new businesses. What many individual railroads have done already, and plan to do in the future, in this direction, is reported in an article herein.

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SMOOTHING THE WAY: Because the railroads' success in providing the faster schedules, smoother handling and maximum economy that shippers are calling for depends so largely on the maintenance and improvement of their physical property —tracks, bridges, freighthouses, icing facilities, yards, shops, and so on—large expenditures in this direction have been made, even while the war was going on, and they will continue to the extent that increasing costs of materials and labor are met by rate adjustments and government policies conducive to an optimistic appraisal of future prospects. Recent accomplishments of this kind are commented on in an article in this issue, which indicates that the railroads' primary problem in this respect is to match ability—financial and, under current restrictions imposed by the "planners" in Washington, physical as well —to opportunity.

●

A MUTUAL PROBLEM: The greatest step that can be taken toward *freight progress* this year, the leading editorial this week points out, is the development between shippers and the railroads of a complete understanding that it is in their mutual interest to work together to obtain a level of freight charges that will assure the continuance of transportation as a thriving and competitive private enterprise. Once a reasonable degree of industrial tranquillity has been attained, following the current wave of major strikes, a high rate of production is to be expected, and this is likely to bring about a demand for cars that the railroads will have difficulty in meeting, even with the utmost cooperation from shippers in reducing delays and securing maximum loading. Improvements to fixed plant are under way, and new equipment is on order, but the outlay the railroads can make for such purposes from now on will depend on their opportunity to make some profit from their operations. Shippers can help to make this profit possible.

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PURCHASERS PLAGUED: Purchasing and stores departments of the railroads have operated under difficulties, in recent months, hardly equalled by the worst they encountered during the war. Shippers who have suffered the same dislocations of normal activities as strike has succeeded strike can easily appreciate the effect that steel mill and coal mine closings, to mention only the most conspicuous, have had upon the regular flow of materials required by the railroads. Equally serious has been the shortage of forest products, although the picture has not been wholly gloomy in that field because some relief has been experienced from the critical scarcity of crossties that prevailed last year.

●

DELAYS DECREASED: Even while the war was going on the railroads were able to make a limited number of improvements to increase the capacity of yards, terminals and main lines that had become or threatened to become bottlenecks sufficiently acute to delay highly essential traffic. Such improvements included, among other things, installations of centralized traffic control. This modern form of signaling has been developed to such effectiveness that its use speeds freight trains on their way about an hour faster for each 60 miles they travel in territory so equipped, an article herein explains.

ENGINE ECONOMY: Right at the moment shippers and railroad men are peculiarly conscious of one major difference between the steam locomotive and its Diesel-powered competitor, that is, the dependence of a great many of the former on the regularity of the coal supply. But in the long run the winner in the competition between these two types of motive power will be determined by economics. Modern units, whether Diesel or steam, are capable of much more service than the older steam-powered engines and the latter are being stored or retired as fast as the volume of business permits. As they are, railroad managements will be better able to use the most economical power type in handling the business available, which means that freight will be moved at the lowest possible power cost for the kind of service demanded.

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THE ONE-PURPOSE CAR: The importance of specially-designed freight cars, tailored to the needs of one class of traffic, is growing, and more and more attention is being paid to the specifications of these cars, with the result that standardization of their design is increasing, while their suitability for the intended use at the same time is being improved. But such developments will not be accomplished all at once. The number of new freight cars that the railroads will receive from the builders this year is problematical, but there is no doubt that it will be somewhat smaller than the need.

●

MEETING COMPETITION: The railroads intend to do everything they can to meet the desires of shippers for better service, because, among the other reasons, they have to do it in order to survive under the competitive conditions of the future. One of the articles in this issue outlining some of the steps they are taking to provide this better service lists many instances where the best pre-war freight schedules already have been restored or improved on, despite the complications of a strike-tortured reconversion period. These, however, are only foretastes of what is planned in the way of quicker deliveries regularly maintained, new equipment and modernized facilities.

●

TRAFFIC STUDY: One of the things the railroads have been doing to fit their freight service as closely as possible to the requirements of their customers is to find out in detail just what those requirements are. In part, this has been the task of the Railroad Committee for the Study of Transportation, and particularly of the Traffic Research Subcommittee, the chairman of which has outlined in an article herein some of the procedures by which its study has been carried on. In the field of l.c.l. merchandise traffic, for example, the committee has gathered detailed information about what the railroads and their competitors have been doing to take care of this traffic, and about what modifications the shippers would like to see made in the service now available.

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3	1372	150	3.70 " " "
2	1715	200	3.92 " " "
1	2158	250	3.88 " " "
1/0	2695	300	3.72 " " "
2/0	3381	375	3.68 " " "
3/0	4263	450	3.51 " " "
4/0	5341	550	3.41 " " "

OKONITE SINCE 1878 **insulated wires and cables for railroad use**

4537

RAILWAY AGE

Requisites for Progress in Freight Service

As this seventh annual Freight Progress Issue goes to press, there is plenty of evidence available as to the trend of post-war production and traffic—but whether or not this trend will, in the main, be directed into the path of true progress remains to be seen. The outcome depends in large measure on the foresight, courage, and statesmanship of leaders in transportation, traffic, and government; and especially on the manifestation of these qualities by the railroads and their customers, because the degree of their far-sighted cooperation will, in large measure, determine the extent to which the political authorities will lack or be given the opportunity to dominate the process. In measure as the railroads and their customers continue the remarkable collaboration and mutual understanding which characterized their war-time conduct, there will be correspondingly less opportunity for disruptive forces to invade transportation policy to the disadvantage alike of the shipping community, of the carriers, and of the national welfare.

No Let-up in the Demand for Cars

The war in Europe came to an end a year ago and that in the Orient nine months ago. And yet—despite all the preliminary fears as to the slump which "reconversion" would occasion, plus the serious strikes brought on by wage demands encouraged by the government to circumvent "deflation"—carloadings on the railroads in the first 17 weeks of 1946, including an entire month of the coal strike, were only 8 per cent below those of the same period in 1945. That is to say, the demand of the industrial community for railroad service as measured in cars has declined very little; and, except for the wave of strikes in large industry, would probably not have declined at all.

When present industrial unrest subsides and industry is once more producing at a rate justified by its orders and its capacity to produce, its demand upon the railroads for car service seems certain to equal and probably exceed that of war-time. Indeed, until the coal strike began, cumulative carloadings had been barely 3½ per cent under those of 1945. Revenue ton-miles have been running 93 per cent above those of 1939 and 43 per cent above those of 1941—both of these being years to the levels of which prophets had "guesstimated" the railroads' post-war traffic would fall.

From the standpoint of actual production of transportation for which the railroads receive payment—i. e., revenue ton-miles—loadings figures are misleading. In January, 1946, revenue ton-miles declined 15 per cent under last year. In February and March the decline was 19 per cent. In April, with the coal strike on, the loss was doubtless even greater. What has happened is that —while industry has this year commanded almost as much in the way of railroad facilities as it did during the war—the average load per car has declined fractionally; the average haul per ton has fallen; and the ratio of empty car-miles the railroads have been forced to move has risen. A further development even more provocative of difficulties for the railroads is the decline in the revenue per ton-mile; the peace-time tonnage does not have so large a ratio of relatively high-rated traffic as that which moved in war-time. The effect of reduced average rates is reflected in the decline in freight revenue, which was 19 per cent in January, more than 21 per cent in February, and more than 22 per cent in March.

These adverse revenue factors combined with increased operating expenses (largely accounted for by the recent wage increase, retroactive to January 1) to bring net railway operating income in March of this year to a deficit of $20 million; and to reduce net railway operating income for the first quarter of the year to $109 million—or just about what it was in the first quarter of 1939, when railroad freight service (revenue ton-miles) was only about half what it has been this year, and when passenger service detracted from net earnings instead of contributing to them as it has done in recent years.

Adequate Facilities the Immediate Problem

The public interest as well as the shippers' interest in the railroads lies in the preservation of adequate, efficient, and economical service under private operation. One requisite to the maintenance of such service is the utilization of railroad plant to a reasonable ratio of its capacity, necessary for economical operation and minimum unit costs. Steps to secure such degree of utilization will doubtless be required as competing agencies of transportation move back into operation, but, for the present, the assurance of adequate use of the rail-

roads is less a problem than assuring that there will be sufficient railroad facilities—particularly freight cars—to meet the demand for them.

The railroads, unlike other principal carriers, are wholly a private enterprise and can meet the needs of their customers for modern and efficient service only to the degree that they can hold out a prospect of satisfactory rewards to investors, to persuade them to advance the funds to purchase and construct the facilities required for continuing improvements. The earnings of the first quarter of 1946 are clearly insufficient for this purpose. The average price of a ton-mile of railroad freight service in January this year was slightly less than in 1939. Average wholesale commodity prices, meantime, have increased 40 per cent. The average hourly cost of labor to the railroads has risen 50 per cent in the same period. It must be overwhelmingly evident to anyone that the railroads cannot, as private enterprise, continue any longer to pay 1946 prices and taxes while their own service continues to be paid for in 1939 dollars.

Conditions Require Shipper-Carrier Accord

The political forces in this country, which, under guise of "fighting inflation," are in reality striving only to ruin private business (as is shown by the fact that they *encourage* increases in printing-press money and in all incomes except those of investors and owners of property) are doubtless counting on some support from shippers in their endeavor to make the railroads so profitless that they cannot continue to function under private financing and control. The greatest *freight progress* which could occur in 1946 would be for the railroads and shippers to reach so complete an understanding and accord that both would stand together for a level of freight charges which would assure the continuance of transportation as a thriving and competitive private enterprise. To the undisputed establishment of this condition all other progress is subordinate and dependent.

The railroads received reasonably fair earnings during the war years; and they used these earnings as much to their customers' advantage as to their own. That is, they reduced their indebtedness, and maintained and improved their properties to the fullest extent possible under war-time limitations on the supply of labor and materials. Never have the railroads so thoroughly surveyed their services in relation to their customers' needs, and planned such large-scale improvements, as articles in this issue set forth in detail. Some of these improvements have already begun, but most of them are still in prospect—dependent upon the "climate" of earnings and shipper cooperation which the next few months will establish. Meantime, railroad service, on the average, is still sub-standard. Car shortages persist, and it has only recently become evident that the carriers are bestirring themselves, as they should, to increase their orders for new cars to a total commensurate with the evident need. Shipper cooperation is further needed—e. g., in heavier loading and reduced detention—to make the limited supply of cars perform the maximum service and, also, even when the supply of cars becomes fully adequate, to keep down the cost of transportation and, hence, the level of rates necessary to provide it.

Right at the moment—with the coal strike only suspended and the possibiilty, even, of a strike on the railroads—the outlook for the railroads and for those who require dependable railroad service in their business is darkly clouded. These clouds could, however, quickly dissipate; and hopefulness demands the faith that they will. Thereafter, plenty of complex problems will remain for solution, but it does not yet appear that large-scale industrial stagnation is likely to be among them. Given a high level of production and traffic, industry and the railroads should be able to find the path to their mutual prosperity, if only they will seek it together and not separately and in opposition to each other.

Heavy or Light?

In appraising the relation between motive power and rolling stock and continued progress in the adaptation of freight service to present day competition, an outstanding tendency is the stepping up of freight-train speeds. High-speed freight-car trucks are being developed to approach the riding qualities of passenger-car trucks without their complexities and higher first cost. In one case—that of the New York Central's recently announced "Pacemaker" overnight service between New York City and Buffalo—the railroad has gone further and equipped the cars with rubber draft gears of the type in use on passenger cars. The cars for this service are not intended for interchange.

The major question of freight-car design now awaiting answer is the extent to which high-strength steels will be employed in the construction of the freight cars of the future. The durability of high-strength corrosion-resistant steel when reduced in section to take full advantage of its superior strength for the purpose of weight reduction has been demonstrated. The question, on the answer to which agreement is slow in crystallizing, is what differential in the price of the car the railroads can afford to pay for a ton of weight saved. The answer to this question is at present held in abeyance awaiting the completion of the proposed load-compensating brake which has been under development for some time.

Choice Is Between Steam and Diesel Power

Without consideration of the several new locomotive types which are now under consideration, but which will not be factors in railway service for some time at the best, the developments of the immediate future lie between the steam and Diesel locomotive. As far as numbers of units in service, are concerned, the Diesel-electric freight locomotive is an extremely small factor in the transportation of the country as a whole. It has, however, played an important part on a number of individual railroads and the number of locomotives in service is increasing rapidly. At the beginning of the current year there was about one and one-half million horsepower of Diesel freight locomotives in service, about one fifth of which was installed during 1945.

The first cost advantage of the steam locomotive is gradually being narrowed by increases in its own price more than by any downward tendency in the price of

the Diesel. The prospect of repetitions of the 1946 coal strike under John Lewis' leadership is a factor definitely favorable to an increase in the use of Diesel locomotives the effect of which will continue as long as there is an abundance of Diesel fuel. On the other side of the account is an improvement in the cost of maintenance which the modern roller-bearing steam locomotive is demonstrating in comparison with older designs.

The need for new cars and locomotives is at the moment obscured by the unsettled state of commerce and industry as the result of the current wave of strikes. More of these are in prospect, making the outlook for the rest of the year extremely uncertain. Assuming an ultimate resumption of production and distribution somewhat in accordance with the reconversion plans in progress before the heavy strike interference began, there is need for 150,000 freight cars. Box and refrigerator cars are acutely short.

As to the need for freight motive power, the statistics of performance show that, measured by standards of the past five years, there is a reserve of locomotives when the usage ratio is as low as 80 per cent. The reserve, however, is one entirely of obsolete stored power which, when put in service, places upon the railroads the burden of using unnecessarily expensive facilities at a time when the need for economy in operation is as great as at any time in this century.

Selling the Service

More than ever before, the railways are alert to the need for selling their freight service to their customers. Since the war the number of traffic solicitors has been increased and many railways have opened as many as four or five off-line offices in cities where traffic representatives were not previously stationed. Moreover, the greater proportion of the traffic solicitors are more familiar with the railways they represent than has previously been the case. This was brought about by the use of freight traffic men as troop train riders during the war. In this way off-line representatives saw a great deal more of their railways than was previously possible. Also, in most instances, while these men were on the line they called at the general offices and were given additional education as to the service they are selling. Thus railway traffic solicitors of the present are better equipped to render real service to their customers as well as to take routing orders.

In addition to personal calls, selling railway freight service is to be augmented by more advertising than ever before. During the war the railways were prohibited from direct advertising for freight and passengers, but a great deal of institutional advertising was run, and the experience thus gained is proving valuable now that direct sales advertising is no longer prohibited.

Selling railway service differs from all other kinds of selling in that no amount of salesmanship can induce a shipper to ship a pound more freight than he has orders for and high pressure salesmanship cannot work as it does in the washing-machine or insurance business, for example. Realizing this, the railways have turned vigorously to activities which will produce more freight. Industrial, agricultural and mineral departments have been expanded, as described in an article in this issue. Beating the bushes for freight—through the various development departments—will be done as never before.

The importance of foreign traffic under the new world scheme is not being overlooked either. Many roads not previously having foreign freight representation have established such departments and existing departments have been expanded materially. The railways intend to keep up the present volume of freight traffic by every means in their power.

Given a Fair Chance Properties Will Keep Pace

In spite of all that has been done to maintain and improve the fixed properties of the railways during and since the war, it must be admitted that one of the reasons why railway freight service is not what it should be today—why improvements in such service have not been forthcoming as fast as was expected with the close of the war one year ago—is the inadequacy of these properties—roadbed and tracks, yards, terminal facilities, signals, and many buildings and other structures involved in the movement or handling of freight. How could the situation be otherwise?

During 15 years of depression and war, the railways never had a chance to keep their fixed properties fully abreast of needs, first because of prolonged inadequate earnings, and subsequently because of critical shortages in man-power, materials and work equipment. More recently, reconversion problems involving strikes and threats of strikes, reduced railway earnings, and inability to secure many essential materials have made the situation with respect to the fixed properties even more severe in some respects than during the war.

Spending More Than a Billion Yearly

The railways have never questioned the necessity of adequate fixed properties to their operations. This fact is attested by their expenditure of more than six billion dollars on these properties for maintenance and improvements during the past five years. Furthermore, in spite of these vast expenditures, they are well aware of the additional needs of their fixed properties, especially from the standpoint of the ability to handle peak traffic, both on line and in terminals, with the greatest degree of satisfaction to shippers, and with maximum economy.

That this is true is indicated clearly in the article in this issue entitled, "Must Keep Plant in Step With Progress." It is evident also in the fact that the files of the engineering departments of the railways are literally bulging with plans for further improvements that will enable the roads to improve their freight service.

At the same time, research by the railways, themselves and in conjunction with railway supply companies, as it affects all phases of the fixed properties, is at an all-time high. Even at the moment railway engineering

and maintenance officers, through the various technical committees of the American Railway Engineering Association, are being asked to make additional recommendations for new or expanded research projects, looking to the more effective and economical solution of existing roadway and structures problems—all in the interest of improved railway service at the lowest practicable cost.

However, the progress the railways can make in the months immediately ahead toward bringing their fixed properties into step with their plans for improved freight service lies largely beyond the control of their engineering and maintenance officers—in fact, beyond the control of their managements; it is dependent much more directly upon a general improvement in the economic conditions of the country, a revision of many faulty government policies, and a more reasonable and co-operative attitude on the part of labor, both on the railways and in industry generally.

Given a chance, the fixed properties of the railways will be brought quickly into step with all of the needs of shippers for fast and efficient freight service. The railways are ready, and their engineering and maintenance forces are eager to expand their efforts. They have the will, the initiative and the know-how. Will they be given a chance?

Cracker Barrel Sales

A number of years ago, in Kentucky, there was an owner of a general store who refused to lay in a supply of a popular brand of shirts because, as he explained, there was too much demand for them and he would be kept too busy selling them. Not so long ago, a railway traffic officer mentioned that several cars he had equipped with loading devices were a terrific headache because all the shippers were demanding them and there were not enough to go round.

The psychology was the same in both cases. As the owner of his business, and being without competition, the country storekeeper was well within his rights not to be bothered, but the same cannot be said for the traffic officer. The railway is paying him to be "bothered" by shippers. In addition to this, he is facing a competitive situation in the post-war transportation market that will be exceedingly acute.

In general, railway traffic officers, and railway officers as a whole, are keenly aware of the competition they will have to face and are doing things about it. However, there are some individuals who have reverted to the attitude that was so prevalent many years ago when the railways formed a practical transportation monopoly. Such officers were brought back to this state of mind, if indeed they ever got out of it, by the tremendous demand for railway service during the war. They still do not seem to realize that in the transportation market, as in all other post-war markets, there is, or soon will be, an abrupt about-face from a seller's to a buyer's market.

In the particular case mentioned above, if the loading device has merit, and the shipper demand would indicate that it has, the railways' customers should be supplied with what they want. The shippers co-operated to the fullest extent during the war in making railway transportation effective. They are appreciative, too, of what the railways did, but in a very short time they will be in position to demand the type of equipment which they think best suits their needs. They will get it, too, or else use competing forms of transportation.

A large number of handicaps have interfered with the restoration of peace-time railway freight service and many of these were beyond the control of railway officers. There have been no handicaps, however, to straight thinking on the part of railway officers or to the necessary change to sales-mindedness. These are essentials if the railways are to get their share of the freight traffic moving in this country in the years to come.

Wage Rises Curtail Jobs

The letter below was written by I. B. Tigrett, president of the Gulf, Mobile & Ohio, and has been addressed to employees of that system:

"During the first three months of this year we handled more tonnage than we did in the same period in 1945—a war year. We had twice as much gross revenues in the first three months in 1946 as we had in the same period in 1940, yet we had net earnings in 1940 and had a net loss in 1946 after applying the last wage award. Actually, taking the combined figures of the Alton and the G. M. & O., we lost more than a half million dollars. This means that out of our three months' operations we not only earned nothing to pay dividends or to pay debts or to finance new equipment or to make other improvements—but we did worse than that—we lost more than five hundred thousand dollars.

"During my long years as president of this company we have never had a parallel situation. On numerous occasions we have lost money when traffic was light, but to find ourselves straining our plant and equipment to handle peak traffic which results in an operating loss is not only discouraging but alarming.

"In 1940 the average compensation of each employee of this railroad was $1,692. By 1945 this had risen to $2,550 per employee. The recent wage award, plus payroll taxes borne by this company, will increase the payroll average cost to over $3,000 per year for each employee. Yet representatives of our employees are even now threatening new demands for increased wages. In contrast, the common stockholders of this company have never received a single dividend. During the war years we used our profits to finance a program for better equipment for the future, and for other improvements.

"Please let me say to you that insofar as the management is concerned, we are going to try to live up to our obligations to our stockholders who have furnished the money to make the railroad possible. We had planned a program of improvements and expansion. We had planned to add another passenger train between Meridian and Mobile involving additional expense and increased employment. These and other steps will be abandoned.

"I would feel myself lacking in candor and frankness if I did not say to you that insofar as we can possibly do so we shall curtail and diminish expenses wherever it is possible, and whenever it may be necessary to do so."

Let's Not Coast on Our Reputations

Carriers and shippers did a good war job but it takes more than service ribbons to make a business success in peace-time

By EDWARD F. LACEY
Executive Secretary, National Industrial Traffic League

THERE is a general tendency on the part of all of us in and near the transportation business to rest on our wartime laurels. Therein lies great danger. The railroads during the war were called upon constantly to expand their services, and because of their splendid operating condition and fitness for mass transportation, they transported the largest volume of tonnage in history, without a breakdown in service and without serious car shortage. The important part which our transportation agencies played in aiding in the winning of the war is well recognized. The elasticity of their service seemed almost unlimited. Each time that they were called upon to expand they responded nobly, notwithstanding their inability to secure new rolling stock and motive power to any appreciable extent. They, too, like industry, were short-handed, yet each employee and officer put his shoulder to the wheel and kept the wheels of transportation rolling. Truly, we have witnessed a transportation miracle.

The railroads have been generous in praising shippers and receivers for the part they played in promoting efficiency with respect to the prompt loading, unloading and releasing of cars. Now that the "shooting" war is over, new problems, almost as stupendous as those occurring during the war, face carriers.

Outlook Is Encouraging

Labor difficulties are gradually being adjusted and industry is forging ahead with its reconversion program. As the tempo increases, the carriers without question will be confronted with an ever-increasing volume of tonnage. The outlook for the future is encouraging. The American business man, although frequently beset with complicated problems, in the long run manages to reach a practical solution, and industry forges ahead. So will the railroads.

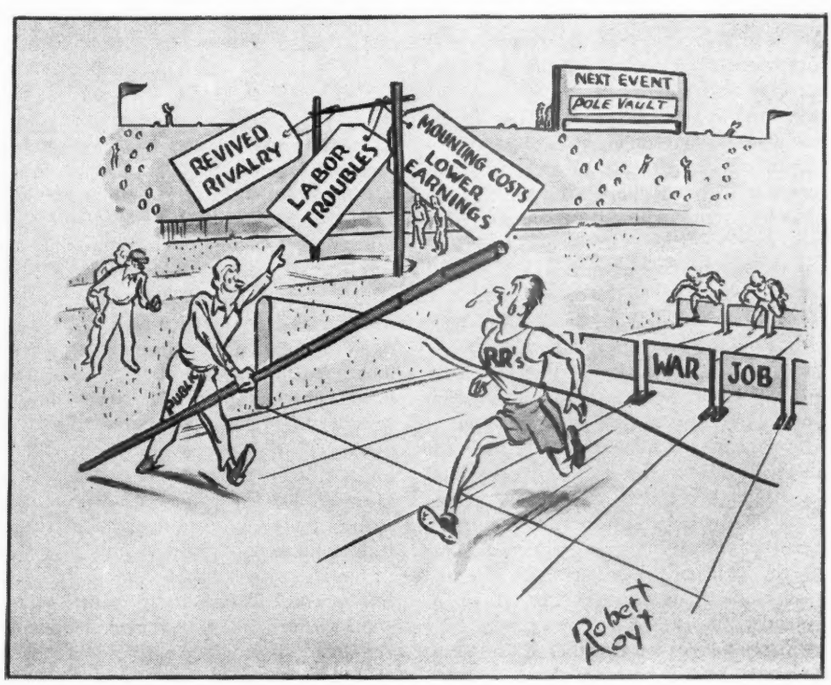
The railroads profited much through the experiences gained during the war. Many of the economies which were adopted during the past five years will be carried on in modified form. Just as business is constantly adopting newer methods which produce more and better goods at less cost, so will the railroads, through their many research committees, which have been and still are at work, devise ways and means for improving the service and giving shippers and receivers faster and more reliable service than was considered possible years ago.

Industry does not stand still—neither can our transportation agencies. Business today is conducted far differently than it was in the decade of the 'thirties. New methods are constantly being developed; new products are being manufactured; and the American consuming public is being educated to the point where it now requires in everyday life many articles which years ago were considered luxuries. There has been a great speeding up in the manufacturing program. Distribution is of paramount importance. Goods which are being manufactured today must be on the dealers' shelves tomorrow. Never in transportation history has there been such a crying demand for prompt and dependable delivery. It is impossible to say what improvements the railroads, for example, will be able to present to the American shipping public ten or twenty years hence, but, in keeping with the times, they must carefully survey the transportation needs of the country and place orders for cars of every description which will be needed to take care of the tonnage which will be offered. The users of transportation might well be consulted as to their needs.

Equipment, because of extreme heavy usage during the war, has deteriorated at an accelerated rate. The grade "A" box car of today becomes grade "B" tomorrow. Of the present day freight cars 32.64 per cent are over 25 years old. More cars have been retired or removed from service during the war than were replaced. During 1945, for example, 45,541 cars were retired, while only 36,976 new cars were placed in service. It is true that the new cars are of larger capacity than those which were retired.

There has been a growing tendency for some years past to increase the size and capacity of freight cars, but, in the

He's won the race—but not the meet!



ordering of new equipment, the protection of merchandise freight weighing, say, from 20,000 to 30,000 lb., has been largely overlooked. The modern box car of today is built to carry from 100,000 to 175,000 lb., but when a car of that size is loaded with merchandise which might weigh only 20,000 or 30,000 lb. it is afforded little protection from vibration. The springs do not ordinarily go into play until perhaps 60,000 or 70,000 lb. have been loaded into the car. Cars should be equipped with adequate springs and shock-resisting devices to afford protection to the lighter loads—otherwise, having in mind the accelerated speed with which cars frequently move, considerable damage to the lading may occur.

The volume of freight claims is on the increase, and it is predicted that for 1946 the figure might amount to $90,000,000. Shippers and carriers alike are greatly concerned, and rightly so, with respect to this enormous figure. Carriers do not want to dissipate their revenues through the payment of avoidable claims. Shippers do not want to sell their merchandise to the carriers in the form of claims. A loss or damage claim always means a dissatisfied customer. While the carriers are to be commended for their work in studying ways and means for preventing loss and damage, more efficient handling of freight, and in sponsoring "perfect shipping month" campaigns, there is still room for substantial improvement. The fact that shippers and carriers alike are concerned and are studying the problem is commendable. Better methods for packing and transporting goods are on the way. Progress must not lag.

Speedier Handling Sought

There is room also for considerable improvement in the method of handling merchandise freight at the freight stations and at transfer points. The carriers would profit much by making more careful studies of methods to improve merchandise schedules. Through merchandise cars should be encouraged wherever possible. Needless transfers are expensive, consume time, and should be avoided. Every effort should be made to load merchandise in through cars, not only to connecting lines, but, where practical, to far-away points, thus assuring more prompt service. The substitution of the motor truck for the way-freight offers means for substantial improvement in the handling of l. c. l. shipments and in giving receivers, particularly at the smaller towns, a substantial and much needed improvement in service. Some of the railroads have already adopted this method, and others are giving it consideration.

For some reason or other there seems to have been a general let-down in transportation service since the end of the war. The over-all turn-around time on all cars, which one normally might expect to have decreased, actually increased from an average of 13 days during the war to 16½ days during February, 1946. The increase in average turn-around time of 3½ days is a serious matter when it is realized that a delay of one day is equivalent to approximately 114,000 cars.

Although there is still a substantial movement of returned troops and war material, the longer turn-around time does not seem justified. Cars delayed by industry are subject to heavy penalty demurrage charges, but no penalty attaches to the railroad for delay to shipments. The time in transit is altogether too long. The assembly line, in mass production, requires a steady inbound movement of material and parts. The receiver has a right to expect to receive his goods on schedule. The good-will which the railroads earned during the war should be preserved. The slogan, *"Don't sell American railroads short,"* is sound, but the railroads might well adopt as theirs, *"Don't sell shippers short on good service."*

Service the First Concern

The average shipper is frequently more concerned with prompt and dependable service than with the measure of the charge. It would be interesting to determine the amount of capital involved in the volume of goods which are in the hands of the railroads for a given period, also the added interest cost to business where shipments are delayed in transit, say 5, 10, or 15 days beyond the ordinary schedule. Greatly delayed shipments cause many headaches on the part of the manufacturer; and the industrial traffic manager is hard pressed endeavoring to locate the "lost" cars and at the same time explaining to management why badly needed material has not arrived. Dependability in service is of paramount importance to industry.

The railroads in their "reconversion program" should make every possible effort, first, to shorten their schedules; second, to maintain schedules once established; third, to deliver goods to destination in the same condition received; fourth, to furnish adequate equipment in good condition and free from debris, suitable for loading the commodity tendered. Plans have been announced during the past few weeks by several of the railroads for speeding up service and cutting the running time, particularly on trans-continental traffic. This is a step in the right direction.

The chief traffic officer of one of the southwestern lines, in a recent address, reminded his audience that business is no longer chasing the railroads, but that they are facing difficult competition, and if they expect to stay in business as private enterprise it will be necessary for them to go out and really *sell their services.* The railroad job, he said, "is to provide the best and cheapest transportation." They must catch up to industry and to the present times.

For Faster Freights

There is every reason to believe that the railroads are thoroughly alive to the situation and that they have sufficient ingenuity and ability to forge ahead. They will not be satisfied with their accomplishments of the years just passed, but will aim their sights still higher, and will offer to their patrons, the shipping and traveling public, a more dependable, expeditious and attractive service. The American public will not be satisfied with anything but the best. Good railroad service is entitled to a fair price, and American industry will always be willing to pay for value received. That is well illustrated in the streamlined passenger trains which have more than paid for themselves. Why not establish streamlined freight trains, and equip freight cars with high-speed trucks capable of maintaining a faster schedule? The railroads have filed with the I. C. C. a petition for a substantial increase in freight rates to offset the recent wage award, and increases in operating costs. Whatever amount they receive from the I. C. C. will place them in a better financial position and will enable them to purchase new equipment which they so badly need.

Yes, from the business man's viewpoint the railroad outlook for the future is brighter. The railroads have been instrumental in building up and in uniting this country. The future holds great promise for them. Each form of transportation will ultimately find its place in our economic transportation picture. The railroads are equipped for mass transportation; they will constitute, as in the past, the backbone of transportation.

Mr. Business Man: *"Do not sell American railroads short."* Mr. Railroad Executive: *"Do not sell shippers short on transportation service."*

NEW G. W. R. LOCOMOTIVES "GO COUNTY".—Locomotives of the (British) Great Western "1000" class are to be named after English and Welsh counties.

The first, No. 1000, is named "County of Middlesex". Twenty-nine other locomotives of the class will be named after the following counties:—

Bucks, Berks, Wilts, Oxford, Somerset, Devon, Cornwall, Dorset, Brecknock, Cardigan, Carmarthen, Carnarvon, Cheshire, Denbigh, Glamorgan, Merioneth, Monmouth, Gloucester, Hereford, Leicester, Northampton, Hants, Montgomery, Pembroke, Radnor, Salop, Stafford, Warwick and Worcester.

Many millions of dollars have been spent by the railways in yard and terminal improvements in order to avoid delays

Freight Service Tailored to the Trade

Many railways already have restored or bettered peace-time schedules—All plan great improvements

DESPITE heavy troop movements, car shortages, strikes, material shortages and other troubles more numerous than the biblical plagues, many railways have succeeded in restoring the peace-time freight schedules that were abandoned during the war under the orders of the Office of Defense Transportation. As a matter of fact, in many instances, faster schedules are now available. Some railways, not so intimately concerned with troop movements and relatively undisturbed by other deterrent factors, were able to restore all peace-time schedules by October, 1945. A survey among the principal railways indicates that the new, faster freight schedules are but forerunners of hundreds more which are to be put into effect at the earliest possible moment.

In a previous article in this issue, Edward Lacey, executive secretary of the National Industrial Traffic League, has outlined what the shippers want. In the past, criticism has been leveled at the railways for paying too little attention to the wants and needs of their customers. While this criticism may have been justified in part in the past, it was always exaggerated and now it has no basis in fact whatever. Viewed only from the most materialistic standpoint, railway executives and traffic officers are by no means unaware of the competition they face from other forms of transportation. That such competition is subsidized, and in many cases uneconomic, is entirely beside the point. It is there—at the beck and call of the shipper, and whether it is unfair competition or not, it has to be met to the best of the railways' ability.

That the railways realize this is evidenced particularly by the fact that the first overall scientific study of the shippers' needs and wants in the post-war world is now approaching completion. The study was made by the freight traffic sub-committee of the general research committee of the Association of American Railroads. In the following article in this issue, F. J. Wall, vice-president in charge of traffic of the New York, New Haven & Hartford, who is chairman of this sub-committee, gives a prog-

ress report to date. Every shipper should read it, because the findings are not what some traffic officer thinks the shippers ought to have, but are based on what the shippers said they wanted.

From the Ground up

Good freight service is not obtained simply by a traffic officer waving a magic wand and saying categorically: "On such a date we shall inaugurate overnight freight service from hither to yon." There is very much more to it than that. In the first place, you can't run freight trains up to 70 miles an hour over just any kind of railroad. To withstand the pounding that such speeds give to the roadbed, well-cared for ballast is necessary, as well as new heavy rails and track fastenings. Also, in the interests of increased speed and safety, proper signaling systems are essential. The cars in which the freight is handled must also be in first-class shape, as well as the locomotives which pull the freight trains. In addition, to handle less-than-carload freight, modern freighthouses, properly equipped, are a "must" if delays to such freight are to be avoided.

Railway roadbed and equipment took a terrific pounding during the war but, insofar as material shortages and manpower scarcity permitted, maintenance of the existing railway plant was continued and many improvements were carried out. Satisfaction of these needs will be continued at an accelerated pace in order to supply the proper physical plant to enable the railways to render the vastly improved service which they plan to give to the shippers. Articles covering these phases of railway operation appear on later pages in this issue.

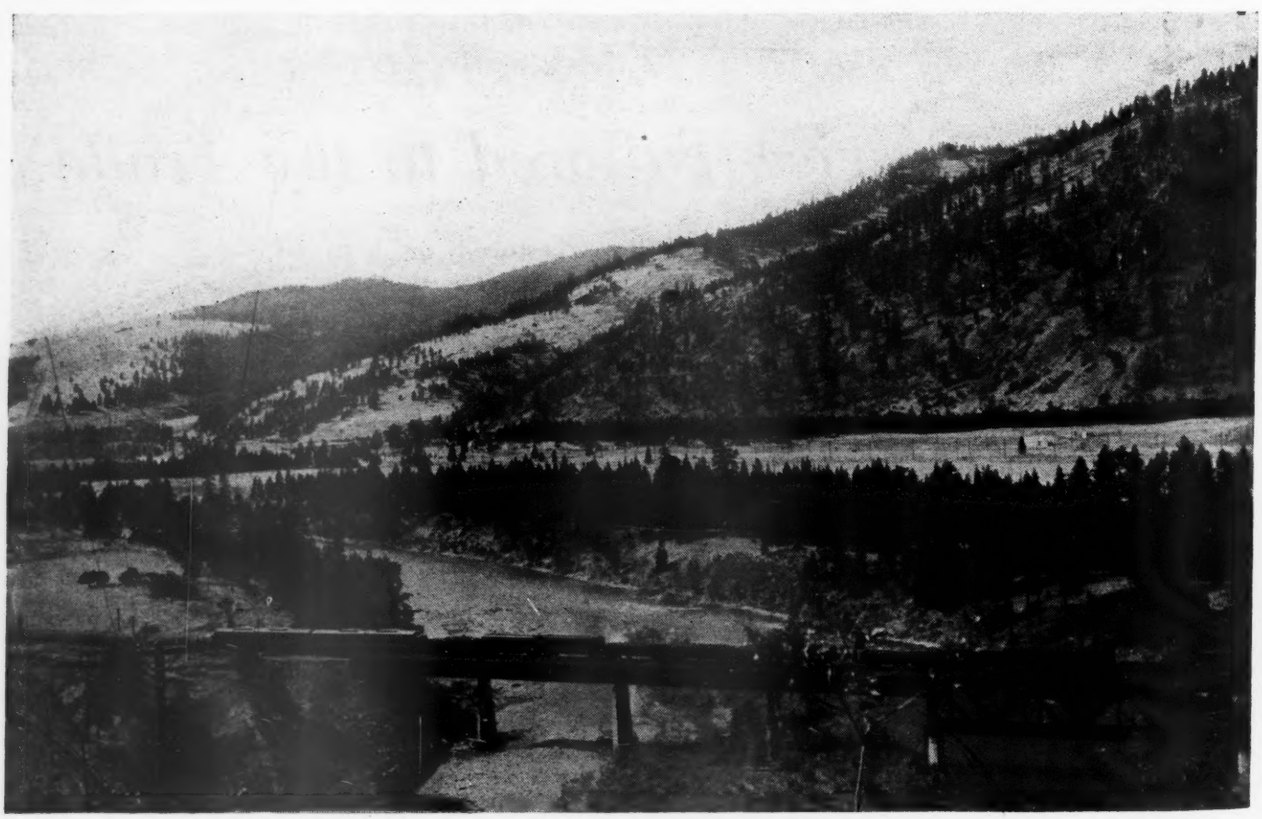
Faster Schedules Planned

In the following paragraphs we do not attempt to give a complete survey of all the improvements in freight service planned by all the railways. What we have done is to give highlights and typical instances selected from as wide a geographical range as possible.

Before the war there were an increasing number of overnight fast freight trains intended particularly for less-than-carload freight between various large cities. These trains would accept freight up to the closing of the freighthouse in the evening and deliver it to receivers in cities 500 miles or more distant the following morning. Included among them was a fleet of fast trains operated by the Illinois Central from Chicago to Memphis. The Santa Fe supplied overnight service from Chicago to Kansas City. The St. Louis-San Francisco operated an overnight train between St. Louis and Tulsa, Okla. The Southern Pacific provided overnight merchandise trains in both directions between San Francisco and Los Angeles, and was expanding this service to include such runs as Los Angeles-Tucson and San Francisco-Portland. The Pennsylvania and the Baltimore & Ohio had overnight trains in both directions between New York and Pittsburgh, and all of the direct carriers between New York and Buffalo also operated overnight trains between those points.

The on-time performance of these speedsters was such that department stores in Pittsburgh, for example, on hearing by telephone from their buyers in New York that a certain lot of merchandise had been purchased on Wednesday afternoon, would confidently insert advertisements in the Thursday morning papers, knowing that the consignments would be delivered to them from New York in time to get the merchandise on the shelves before the stores opened for business.

Almost all such overnight trains have now been re-established and there are many more on the way. The most recent announcement of such a train was that of the "Pacemaker" of the New York Central which, with specially built freight cars, makes the run of 435.9 miles from New York to Buffalo in 10 hr. at an average overall speed of 43.5 m. p. h., which is certainly stepping right along



A full 24-hr. day has been cut from transcontinental freight schedules

for a freight train. As a part of this service, and via connecting lines from the Niagara frontier, it is planned to have overnight service from New York to Toronto. This train began operations this month.

Other outstanding schedule improvements are as follows:

Second morning delivery between St. Louis and Houston-San-Antonio.

A reduction of 15 hr. in the Chicago-Houston schedule, and of 9 hr. 30 min. between Minneapolis-St. Paul and Houston.

A cut of 24 hr. in the schedules between Chicago and the Pacific Coast.

Overnight service on coal from Southern Illinois mines to Chicago. Also, a reduction in schedule of over 5 hr. between Chicago and Southern Illinois on general freight traffic.

A cut of 12 hr. from Cincinnati, Ohio, and Columbus to Norfolk, Va., making early second morning delivery possible.

Second morning delivery between Chicago and Atlanta, Ga.

Second morning delivery from Cincinnati-Louisville to gulf ports.

Second morning delivery for merchandise traffic between New York and points as far west as Ft. Wayne, Ind.

A cut of 24 hr. to make third morning market delivery in New York on Florida perishables.

A reduction of 4 to 6 hr. on coal from West Virginia mines to tidewater.

A reduction of 24 hr. from New Orleans, La., and Shreveport to Louisville, Ky.

A cut of 8 hr. 30 min. from Chicago to New Orleans.

A reduction of 2 to 6 hr. between Kansas City-St. Louis and Birmingham, Ala.

A reduction of 24 hr. between Chicago and the Pacific Northwest.

These typical examples of expedited service since the war make a formidable list of improvements. However, they are only a part of those that have been made and an extremely small part of the improvements that are contemplated as soon as various restrictive handicaps are removed. It is not too much to say, as a result of a survey of what the railways plan to do, that freight schedules will be accelerated in the next year far beyond any past improvements in a similar period.

Rail-Truck Coordination

An important factor in connection with the better freight service between the bigger centers is that, through coordinated rail-truck service, the smaller towns will receive the benefit of such improved schedules. Most of these overnight trains pick up and set out cars at specified centers and distribution points and the merchandise is fanned out to and from the local stations by truck, thus affording deliveries to the smaller towns on approximately the same basis as those to the larger cities.

Before the war, the Canadian roads had established fast overnight freight schedules, particularly between Montreal and Toronto, that were comparable with such runs in the United States. This type of service will be renewed and extended materially as soon as possible.

Belt Line Operations

The belt and terminal railroads of the country are dependent upon their connections, of course, so far as freight schedules are concerned. Nonetheless, such lines learned much about avoiding terminal delays to freight during the war and these lessons are being applied to post-war operations, to the betterment of freight service. The belt and terminal lines are as one with the trunk lines in their determination to give the shippers what they want. So far as interline traffic is concerned, they play an important role in the avoidance of delays and are set up now to carry out this role.

The Improvement Programs

The intensive improvement programs now being carried out by the railways are described in detail in other articles in this issue. Such programs may, however, be summarized here. They include the installation of crushed stone and prepared ballast and new ties. Extensive laying of new and heavier rail is continuing. Line changes to better alinement by reducing grades and curvature and to shorten distance are being carried out on a large scale. Such realinement frequently involves work costing up to $1,500,000. In some cases it means the removal of the necessity for helper engine service and, in all cases, it permits the improvement of running time over the territory affected. Saving in running time is also brought about by the installation of centralized traffic control, under which system trains are operated by signal indication only. The elimination of train orders also puts an end to the archaic practice of stopping a train to give it orders to proceed.

Yards and terminals, as well as rail-water transfer facilities, are being improved. In many yards, radio communication between the office and the yard locomotive is materially speeding up switching. New locomotives and new cars are being purchased in large quantities. Shop facilities are being modernized to keep the rolling stock in the best possible shape. In fact, in all departments, huge expenditures are being made to put the railways' physical plant in condition to supply the service necessary to meet competition.

Selling the Service

The sales force of all the railways, as represented by traffic solicitors, is being expanded. Almost every railway has added traffic representatives and has also opened one or more new off-line traffic agencies. Moreover, during the war, it was the practice to call in off-line freight solicitors to serve as riders in troop trains. Because of this, there has never been a time when off-line men were as thoroughly familiar with the railways they represent as the present. Moreover, many roads have followed the practice of calling in their off-line representatives periodically to give them a chance to familiarize themselves with the railway whose freight service they are selling. Also, there has been a distinct change in traffic solicitors. In general, they are no longer mere cigar distributors, but are prepared to give the shippers real service in many ways.

The important matter of tracing cars is being given greater attention than ever before. Many roads have installed complete teletype or other communication systems, so that shippers and receivers may be kept currently informed as to the location of their freight.

Special departments concerned only with merchandise freight have been formed on many lines. Such departments will concern themselves with the solicitation of less-than-carload freight and the type of service it gets after it has been routed over their lines.

There has never been as much advertising of freight service as at present. Many lines are using national media as well as local newspapers. Also, as soon as O. D. T. order No. 1 has been lifted and the railways are able to set up their new package car schedules, booklets outlining such service will be made available to shippers everywhere. Some railways, notably the Santa Fe, are using their box cars as advertising means and, in view of the fact that the cars are to be found in every part of the country, such advertising is also effective.

From a freight service standpoint, the railways are ready to give the shipper what he wants. From a sales and advertising standpoint, they are prepared to tell the shipper what they have to offer. For these reasons, railway officers are looking to the future with a justified confidence.

LONG PULL FOR ONE LOCOMOTIVE.—During the German break-through in the '44 winter, numerous heavy trains of supplies moved out of the Antwerp (Belgium) docks for forward areas. What is believed to be the largest moved in that area was operated by a crew of the 743rd Railway Operating Battalion, with a single U. S. Army 2-8-0 locomotive hauling 101 loaded cars. The train crew included: T/5 John H. Riley, engineer, of Spencer, N. C.; T/5 Marshall M. Floyd, fireman, from Henderson, N. C., and Sgt. Ralph E. Lowry, conductor, of Cambridge, Ohio. S/Sgt. Vernon L. Taggart, of Memphis, Tenn., was on duty as yardmaster at that time.

Customers' Needs Being Intently Studied

A.A.R. research group probes prospects for all important items of traffic, and how railroads can win such business

By F. J. WALL

Vice-President, N. Y. N. H. & H., and Chairman, Traffic Research Sub-committee, A. A. R.

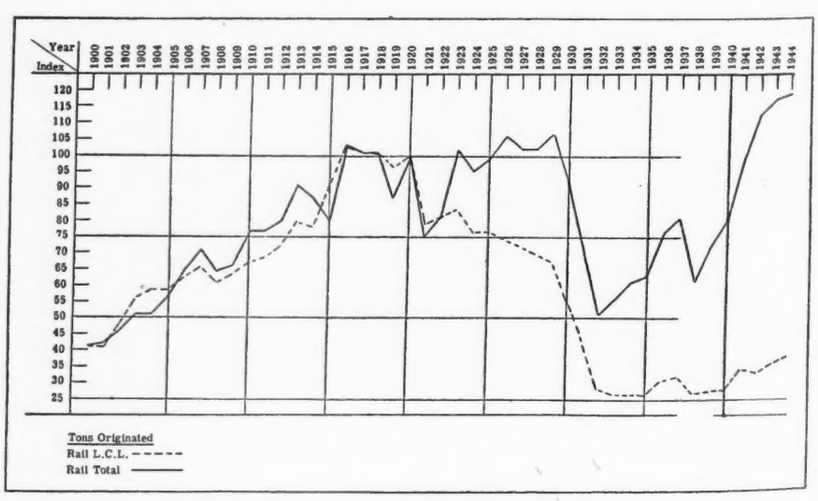
THE Traffic Subcommittee of the Railroad Committee for the Study of Transportation has been busily at work conducting extensive traffic studies as an aid to planning on the part of the railroad industry. As has been outlined in previous articles and items in this magazine, the Railroad Committee for the Study of Transportation is a general committee composed of over 50 officers from practically all departments and branches of the railroad industry and from all over the United States under the chairmanship of Judge R. V. Fletcher, vice-president, research, of the Association of American Railroads.

The primary purpose of this organization has been to compile and present, in usable form, basic information about all forms of transportation and all phases of railroading for the use of railroad men in their efforts to obtain the highest degree of usefulness of railroads under changing conditions in the postwar period.

To carry out its program the Railroad Committee for the Study of Transportation divided its work into 15 parts, each handled by a separate subcommittee. These groups have been studying practically every field of transportation endeavor. In this research it was decided that as a step of paramount importance they should consider the economic climate in which the railroad industry will have to live in the years ahead. Among other things, that included determining what traffic will be available for transportation and where it will probably originate and terminate. To that end the Economic Subcommittee has made individual studies of practically all the major types of industry in the country, determining what has been happening in the past, the effect of the war, and the short-term and long-term outlook for each industry. That committee has also made a comprehensive over-all economic survey.

The railroads are keenly aware that the more they know about and under-

Chart A.—Trend—Tons Originated, Rail L. C. L. and Total—Class I Railroads—Years 1900-1944 inclusive



Source: I.C.C. annual statistics.

stand the economics and conditions of the industries generally, the better they will be able to serve the shipping public. Likewise the railroads have been fully cognizant of the fact that they will be faced with stiff competition for the traffic of these industries and for passenger travel. In order that the railroads might be fully informed about possible competition, the Subcommittees on Motor, Air, Water and Pipeline Transport have each made intensive studies of all these modes of transportation. The various other subcommittees have gone forward with their respective work on Engineering and Mechanical questions, Public Relations, Taxation, Operating Methods and Procedure, Labor and Personnel, Consolidation, Legislation, Accounting and Statistics, and Finance.

The work of the Traffic Subcommittee is particularly vital. This subcommittee is composed of F. J. Wall, vice-president, N. Y. N. H. & H., chairman; L. R. Capron, vice-president, C. B. & Q.; A. F. Cleveland, vice-president, A. A. R.; J. Russel Coulter, chief traffic officer, St. L.-S. F.; W. S. Franklin, vice-president, P. R. R.; W. W. Hale, vice-president, S. P.; W. McN. Knapp, vice-president, C. of Ga.; J. E. Tilford, vice-president, L. & N.; H. W. Von Willer, vice-president, Erie. E. C. Nickerson, assistant general traffic manager, N. Y. N. H. & H., serves as director of the subcommittee's program.

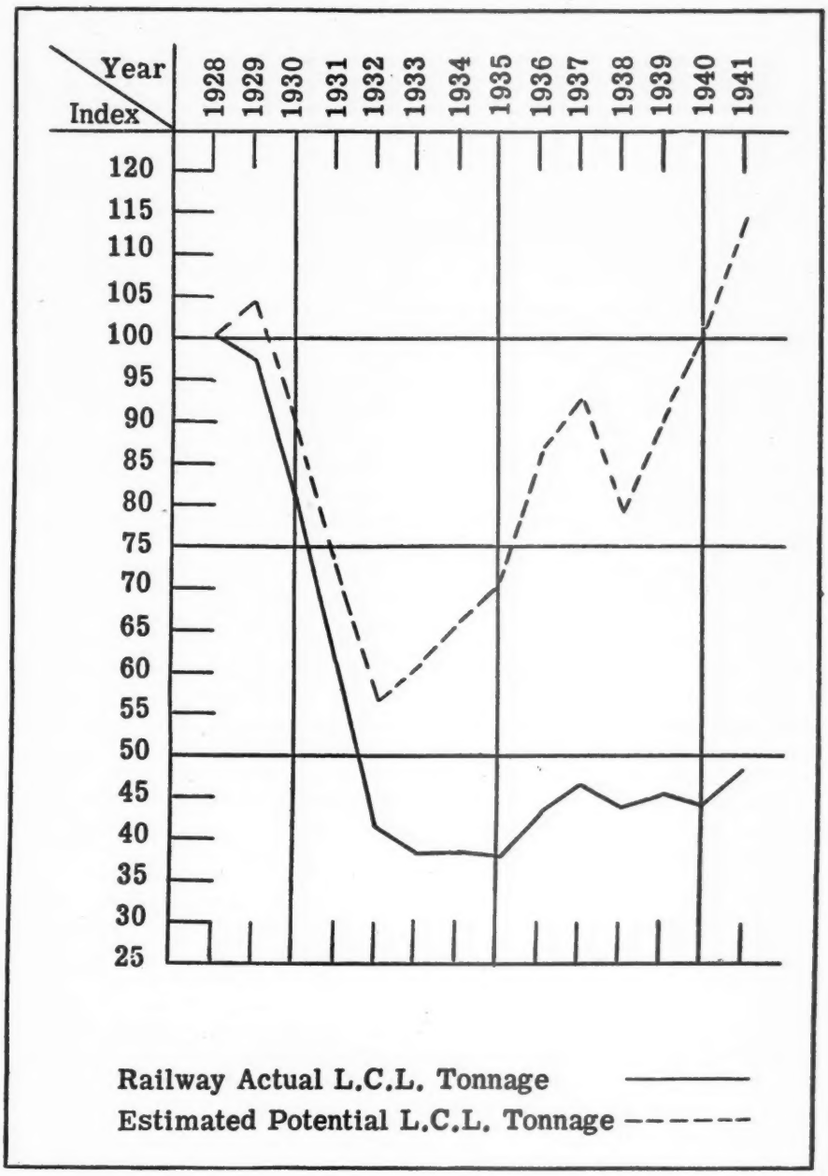
Commodity Committees Formed

The Traffic Subcommittee, and its various divisions, was organized to take over the findings of the various other subcommittees—particularly the reports of the Economic group—as to outlook for total traffic available, and the reports of the Motor, Air, Water and Pipeline subcommittees as to the outlook for competition for this traffic, and make further studies as necessary, as a basis for determining what kind of service the railroads should offer in order to secure a full share of the traffic in the years ahead.

The members of the Traffic Subcommittee fully recognized the immensity of the problem with which they were dealing. They were also aware that in the final analysis the success of the railroads will depend in considerable degree on how they meet the needs of individual shippers, of individual cities and towns, and of individual parts of the country. They therefore appointed 25 separate committees, composed of railroad traffic officers from each of the major territories or sections of the country, to study questions pertaining to carload freight. Each of these 25 committees has been assigned a particular group of commodities which are important to the railroads and our nation's economy. Working along similar lines the Traffic Subcommittee appointed a committee for Merchandise Traffic and one for Freight Sales and Development, which have been conducting studies in these fields. It also appointed a separate group composed of railroad passenger traffic managers from every part of the United States who have made a comprehensive investigation of passenger traffic.

The Traffic Subcommittee was quite aware of the fact that a vital factor was the views of the shippers as to their requirements for satisfactory transportation service. To obtain a good cross-section of shippers' views, a questionnaire booklet entitled "For Better Service" was sent out in October, 1945, to about 20,000 major shippers and receivers of freight throughout the United States. The underlying purpose was to find out from the shippers themselves the kind of railroad service which would be necessary to induce these shippers to continue shipping by rail, and, if possible, to induce them to transfer to rail movement traffic now served by other transportation agencies. This booklet, the cover of which is reproduced in an accompanying illustration, contained 36 questions. For example, one question was: "Were pre-war railroad carload

Chart B.—Railway Actual and Potential Tonnage, All L.C.L. Freight, as Estimated by I.C.C., Class I Railroads, 1928-1941 Inclusive



Source: "Fluctuations in Railway Freight Traffic Compared with Production" —I.C.C. Bureau of Transport Economics and Statistics—Statement No. 4257

and l. c. l. services satisfactory as to road speed and terminal services (including l. c. l. pick-up and delivery) for your needs, for all of your traffic, and to move this traffic in the future? If not, please state in detail why and what the railroads should do to make it so."

Other questions included such typical ones as these:

"Did railroad freight cars meet your requirements for carload and l. c. l. traffic before the war—in construction, dimensions, capacity, protection of lading, etc.? Where they did not, please indicate type of car and other detail of situation, with your suggestions for improvement."

"Do you have any suggestions on how loss and damage to your rail freight might be reduced?"

"Were railroad pre-war sales, contact and servicing methods and practices satisfactory and effective with your company? If any were not, please give details and suggestions for making them satisfactory and effective." The responses to this questionnaire were very satisfactory.

As the Traffic Subcommittee progressed with its work it became evident that from both a revenue-producing and competitive point of view, traffic moving in l. c. l. lots was of extreme importance. In fact, during the period 1928-1941 traffic moving in railroad l. c. l. service produced more railroad gross revenue than any single commodity moving in carload lots, except bituminous coal. In 1944 the railroads' revenues from all small-lot shipments amounted to $684,570,171; the source of this was $374,130,598 from shipments moving in railroad l. c. l. service, $127,827,510 paid to the railroads by the Railway Express Agency on l. c. l. express business, $101,200,000 paid to the railroads by major freight forwarders, and $81,414,063 paid to the railroads by the Post Office department for handling parcel post. Although this sum of $684,570,171 appears large, it should be compared with the potential market of over $3,000,000,000 annually—the estimated gross revenues received by all agencies of transport for handling small-lot shipments in intercity service. This is particularly startling when it is realized that the freight revenues for the Class I Railroads in 1938 from all carload and l. c. l. traffic were $2,858,077,292.

The Merchandise Division of the Traffic Subcommittee has made an exhaustive study of the less-than-carload merchandise traffic situation. This division or committee is composed of A. S. Baker, assistant to vice-president, B. & O., chairman; H. D. Hartmann, general freight agent, N. Y. N. H. & H.; F. S. Baird, assistant vice-president, N. & W.; A. W. Richardson, freight traffic manager, Wabash; W. M. King, assistant vice-president, Southern; R. A. Trovillion, general traffic manager, I. C.; S. G. Grace, assistant freight traffic manager, C. M. St. P. & P.; R. I. Wells, assistant to chief traffic officer, M. P.; C. T. Collett, freight traffic manager, S. P.; C. A. Frey, vice-president, R. E. A.; G. W. Frink, general merchandise agent, St. L. S. W. T. E. Huffman, merchandise traffic manager, T. & P., served as director of the Merchandise Traffic study.

Study of L. C. L. Prospects

Their studies reveal, as shown on the accompanying Chart A, that from the 'twenties up to the start of the war there was a severe decline in l. c. l. railroad traffic. This was brought about in large measure by the growth of competition from other agencies of transportation, which, particularly during the early part of this period, enjoyed relative freedom from regulation and depressed wage rates which assisted them in making serious inroads into railroad traffic. The severity of the diversion of railroad l. c. l. freight is illustrated in Chart B.

The Merchandise Division of the Traffic Subcommittee made a complete study of the trends of merchandise traffic not only by rail, but also by each of the other transport agencies. They investigated thoroughly the nature of both the traffic and operations of competitive types of transportation. Careful analysis was made of the comparative classification, rates, and packing requirements of the several agencies of transportation. The pick-up and delivery situation by all modes of transport was examined, as well as the comparative service both in the terminals and line-haul. The type of equipment used by each method of transport was reviewed, as well as the type of railroad equipment suggested by shippers. Comprehensive investigation was conducted of freight houses and transfer point practices and possible changes to meet shippers' requirements. There were also detailed studies of present practices and possible improvements to make the service more attractive to shippers on published merchandise schedules, special railroad merchandise departments, tracing of l. c. l. shipments, waybilling, claims and credit. Several other subjects were included in these studies.

On practically all of these subjects the Merchandise Division gathered detailed information about what the railroads and each of the competitive agencies of transport were doing. Added to this they used the results of the returns of the questionnaire "For Better Service" concerning the kind of service the shippers and receivers want. Several of the questions in this booklet pertained wholly or largely to l. c. l. traffic. For example, one question was: "During what hours of the day will you require the services of local railroad freight offices, freight houses, and pick-up and delivery trucks after the war?" Another was: "Would the railroads secure more of your l. c. l. or merchandise traffic if their traffic departments included sales and service groups specializing in that type of traffic?" Several other questions also pertained to l. c. l. traffic.

This study also made use of the results of a survey by the Traffic Subcommittee covering over 1,300 railroad officers and employees throughout the country. This survey included the views of traffic, operating, accounting and other department officers, covering practically every major phase of merchandise traffic and operations, especially these men's views about improvements which might be made.

All of this information is being organized and combined into a comprehensive report for the use of the railroad industry.

The merchandise study has been explained in some detail in order to give an example of the type of studies being made by the various divisions of the Traffic Subcommittee, as well as because of its extreme importance. All of the Traffic Subcommittee studies—not only the one on merchandise, but also those on passenger traffic, freight sales and development, and various carload studies—will provide the railroad industry with a great deal of useful information which should be helpful to them in promoting their traffic and earnings by gearing their service to the needs—actual and prospective—of their actual and potential customers.

Poster No. 273 of the "All the Year—Every Year Safety Program," now being distributed by the Committee on Education, Safety section, A. A. R.

Despite war-time and post-war scarcities of materials, the railways have improved their physical plant during the past year

Efficient Transportation Still Requires Shipper Cooperation

With a continuingly tight box car situation, expeditious handling by both railways and shippers remains a prime necessity

THE conversion of railway transportation from war-time to post-war needs took place rapidly, as, while many operating conditions are quite different, the basic methods of producing mass transportation remain the same. New problems arose, however, and, while the expected decrease in open-top car loadings actually took place, the box car situation has continued tight.

Entering the first full peace-time year of 1946, the railways were immediately called upon to produce new transportation records. Because of the imminence of the coal strike, loadings of bituminous coal were the heaviest since 1927. The number of cars of coal loaded exceeded 180,000 during each week between January 19 and March 30, and in one week —ended March 23—190,058 cars were loaded. Perishable loadings in refrigerator cars have been averaging 35,000 cars per week, with a record week of 37,197 cars. During the week ended March 30, the railways reported loadings of 384,112 box cars, which is a new high, the previous high of 380,527 cars having been for the week ended November 3, 1945. Coal cars were largely idle, of course, during the miners' strike, and loadings of others cars were affected by the 3-day embargo on all freight (except foods, fuel and certain other specified commodities) which resulted from the coal shortage. Otherwise, however, cars have been in great demand, and there have been sporadic shortages of gondolas and flat cars on the Pacific coast.

Cooperation Essential

Despite strikes, embargoes and other deterrent factors, the demand for all types of railway cars promises to be very heavy. In speaking of what the railways plan to do, L. M. Betts, manager, Railroad Relations Section, Car Service Division, Association of American Railroads, made a significant statement last month. He said: "In the light of heavy demands for all kinds of cars to meet impending peace-time production, the railways have on order or in the process of being ordered, in excess of 30,000 box cars and over 60,000 cars of all types." He added that under the recommendations of the A. A. R., consideration is being given to the ordering of an additional number, expected to produce a total of 125,000 to 150,000 new cars.

What the future holds in the way of securing new cars was described by Mr. Betts as follows: "The number of cars that can be obtained is problematical. The continued shortage of lumber and the extremely tight situation as to all kinds of steel parts, together with continued labor uncertainties, militate against the securing of full productive capacity of the car builders. It can be stated unqualifiedly that the railways propose to provide sufficient cars to protect the traffic offered to them to the full extent of their ability."

Colonel Johnson, director of the Office of Defense Transportation, has called attention to the decline in efficiency with which cars are being maintained and used, has urged the railways immediately to order — and government authorities and car builders to afford them opportunity to acquire—150,000 new freight cars, and has urged better cooperation meantime by shippers and railroads.

Obviously, peace-time operations on the railways differ materially from those obtaining during a war. One of the outstanding differences is in the average haul per car. This rose steeply during the war years as a result of long-haul shipments of war materiel from interior points of manufacture to the ports on both the Atlantic and Pacific coasts. In

Photo—Van Kan

Grain and other export materials move in large quantities to ports. Rendered idle by the strike, the coal car has been the only type of equipment not in constant use

general, more cars are needed by far to produce the same gross ton-mileage when they are making the shorter journeys that preponderate under civilian rather than war-time economy. If, as seems likely, the present volume of traffic continues and, further, if the customary seasonal increase in traffic takes place next fall, the car situation will be extremely tight and cooperation by both the shippers and the railways will be necessary to avoid a transportation crisis of greater or lesser severity.

Thus it would appear that the railways are alert to the vital need for new cars to replace the "war-weary" equipment that took such punishment during the past five years. On the other hand, in the interests of efficient transportation, the railways' customers must continue their cooperation. Many shippers are chafing at the restrictions imposed by O. D. T. General Order 18-A, which provides for maximum practical loading of equipment. Most of these requirements may be substantially in excess of tariff minima; nevertheless, they are also under the load limit of the car in practically all cases, except where the commodity itself is bulky and there is no reason why cars should not be loaded to the visible capacity.

The effect of the requirements of this order is shown in the average tons per car as reported by railroads to the Interstate Commerce Commission in their annual statistical reports of commodity loading. Comparing the last pre-war year, 1941, with 1944 (1945 data are not yet available), the tons per car, all commodities, increased from 38.2 to 40.3; products of agriculture, 28.5 to 32.9; animals and products, 13.4 to 15.5; products of forests, 31.7 to 34.5; and manufacturers and miscellaneous, 27.9 to 31.2. There is no question but that this unusual increase was due to the effects of this order of O. D. T. Considering there were 22,316,871 carloads of these commodities originated during 1944, it does not take a mathematical genius to determine how many more cars would have had to be loaded in 1944 if the tons per car had been on the basis of the 1941 statistics.

The above data do not include products of mines, which increased from 54.2 tons per car in 1941 to 55.2 in 1944. The commodities included in this latter group are not generally subject to O. D. T. 18-A, as they are, broadly speaking, commodities which load to the capacity of the car—coal, ore, stone, sand and gravel.

There was no car surplus in 1944, neither was there any shortage of any consequence except the occasional spot shortages due to delayed distribution. There has been no comparable increase in car ownership during this five-year spread. The condition of the equipment is not comparable with what it was in 1941, due to labor and material shortages.

To compare a few of the commodities which load in substantial volume:

Commodity	*Tons per car 1941*	*1944*
Wheat	46.9	50.0
Corn	43.8	48.3
Flour	26.3	36.0
Mill products	23.8	31.9
Oranges and grapefruit	17.9	23.2
Apples	17.1	19.5
Potatoes	17.5	21.0
Iron and steel	53.4	58.3
Nails and wire	26.6	30.1
Iron and steel, N. O. S.	35.4	41.7
Brick	39.5	44.1
Fertilizers	37.1	42.5
Printing paper	23.4	29.1
Manufactures and miscellaneous	21.6	24.9

Danger of Light Loading

If some shippers and trade organizations have their way and the tons per car revert to the 1941 level, it will be quickly apparent that a great number of additional cars will be required to meet the demands of the shippers. These cars are not available and cannot promptly be made available. The situation, therefore, is such that shippers and receivers have the alternative of arranging for, or agreeing to, a continuation of these provisions now a part of 18-A, or accepting a general car shortage. A continuation of the heavier loading program should, of course, be uniformly applicable and not more favorable to one commodity group than to another.

There are many times when the railroads come in for some justifiable criticism in the matter of service; that is, there are delays in the handling of cars in terminals, placing on shippers' tracks, or removing from tracks after release from lading. On the whole, however, they have continued to do a better than average job. The turn-around time may not now be quite as good as it was in the corresponding months of the previous year; nevertheless, the slippage is not large and one reason for that is the five-day week in industry, with which loading and unloading cease for the week-end in a great many instances. There appears to have been a certain amount of "letdown" on the part of labor connected with transportation, a condition that applies to industry and railroads alike.

Demurrage

Shippers, too, are chafing at the penalty demurrage which the Interstate Commerce Commission has applied as circumstances appear to warrant. It is a fact that car situations which have previously been tight have eased measurably following the application of penalty demurrage. Demurrage is a form of revenue that railroads do not want. They want the cars that these high rates produce and the penalty demurrage is not effective until after a reasonable time has been given the receiver to release equipment. Therefore, he may avoid the demurrage unless he wishes to use cars for storage rather than transportation.

Beginning a little less than a year ago railroads were requested to report their weekly carloadings separated by types of cars. There is thus available for the first time information with respect to the number of box cars loaded. These loadings are believed to be equal to, if not higher than, box car loadings prior to V-E Day. The country is still in the reconversion period; perhaps it might be said to be in the early stages of that period. The demand for box cars for loading will obviously increase to no small extent. There is another bumper grain crop about to be produced. The demand will increase for cars for the loading

of construction material, particularly lumber.

There has been a marvelous spirit of cooperation between users and producers of railroad transportation during the war years. It has been a part of the patriotic effort. The patriotic urge is no longer present. It will be necessary to develop this urge in another form, if satisfactory transportation by rail is to result.

The fact that there are now no grain elevators anywhere in the country blocked for lack of cars suitable for grain loading indicates the present situation. One thing that has brought this about is that the winter of 1945-1946 brought no such severe weather as the previous year and there was, therefore, no repetition of the dislocation of the normal flow of box cars to and from the East. W. C. Kendall, chairman of the Car Service Division, Association of American Railroads, and members of his staff have described the situation clearly and the following paragraphs are a summation of these reports.

Despite an all-time record production of grain in the past two years, grain stocks on the farms are substantially below the average of the previous ten years. A larger part of larger crops has been moved by the railways than in any previous period. In each year since 1943 grain loadings have broken records, having been 2,734,308 cars in 1945, as compared with a 10-year average of 1,941,980 in the years before the war. This has been carried over into 1946, loadings being consistently heavier this year.

No figures are as yet available as to the probable yield of spring wheat, but a preliminary estimate on winter wheat gives a figure of 750,000,000 bushels. This approximately equals the 1944 crop and is somewhat smaller than the 1945 harvest. In years of less heavy box car demand, it has been customary, about April 1, to begin making plans for relocating empty box cars on western roads for storage prior to the crop movement beginning early in June. This arrangement was not possible in 1945 and it will not be possible this year to any great extent. However, last year's crop was handled without too much difficulty and no crisis is expected this year.

Shippers' Attitude

Just how the shippers are reacting to the present situation is described by Edward Lacey, executive secretary, National Industrial Traffic League, in an earlier article.

On April 8, C. J. Goodyear, president, National Association of Shippers Advisory Boards, and traffic manager, Philadelphia & Reading Coal & Iron Co., wrote to the general chairmen of all the boards as follows:

"You are all familiar with the modification of the penalty charges on refrigerator cars and the suspension of such charges on box cars which took effect on April 3. These orders are an indication of the readiness of Director Johnson to limit restrictive measures as quickly as the situation will, in his judgment, permit.

"While these changes indicate an improvement in the car situation they should not be considered as evidence of any lack of necessity for close attention to the problem of keeping the turnaround time of cars at a low figure. You have undoubtedly noticed that weekly car loadings have been increasing steadily week by week. With the reconversion of industry to peace-time production and the passing of the wave of strikes which has pervaded American industry, the demand for commodities of whatever nature will bring about a flow of traffic which will continue to increase for some time to come.

"In order to provide cars for this increased traffic, something more than increased railroad efficiency is going to be needed. Our members should be cautioned to continue to release cars as soon as conditions will permit in order that the supply will hold up and that the necessity for further restrictions from Washington may be avoided."

At a recent meeting of the Trans-Missouri-Kansas board, General Chairman Edward F. Ledwidge, general traffic manager, Granite City Steel Company, delivered the following message to members of the board:

"History was made during the last year in more ways than one. We saw the victorious end of World War II. This country still has an undefeated record. That is what every citizen of these United States expected; but what they did not expect to see was the successful and unbelievable performance of the railroads. In giving praise to the railroads for their outstanding performance we must not overlook the fact that that was accomplished only through the unswerving cooperation of the shippers and the government. How was this cooperation made possible? Only through the 13 advisory boards.

"I hope and I believe that when this year is past we will be able to look back and make the same complimentary remarks. However, this is not going to be easy. There is going to be a lot more cooperation necessary as well as a lot of work. Each shipper must remember that he is only one of many shippers and that each one wants cars to move his freight. Each railroad company must realize that it is its job to furnish these cars. There are not going to be enough cars unless both shippers and carriers handle cars faster. If everyone concerned will make up his mind to get rid of every car he gets as fast as possible we can move more freight with the present equipment.

"Right here I want to point out to each shipper present that the carriers are watching you and checking your car detention. Now you should watch them and whenever or wherever you find that the carriers are delaying the movement of any freight cars you should report it to this board for correction. This is your clearing-house for such complaints, and if you have any, get up at this meeting today and tell us about them. Give facts, car numbers and dates. Pin the carriers down. Make these complaints public."

The Railroads' Attitude

The present situation was adequately summed up in a recent address by L. M. Betts of the Car Service Division of the A. A. R., who has been previously quoted in this article. In speaking before a shippers' board, he said that we all thought that after V-J Day our troubles were over. "We went into a rather hysterical demobilization of the greatest war machine ever known in the world, and then we started demobilizing our home front. We were even talking about demobilizing our car efficiency committees. It was seriously considered by several of the boards that their services would no longer be required.

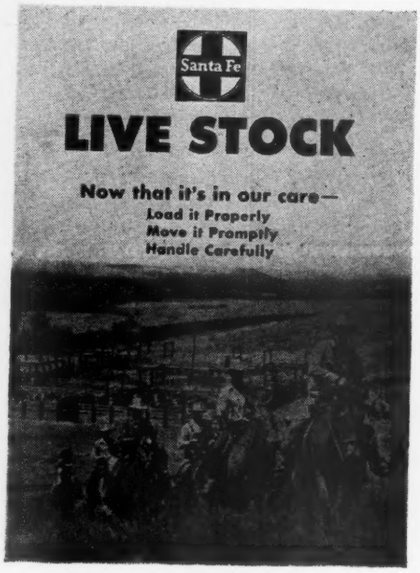
"It did not take very long, however, to realize that with the five-day week in industry, with the general let-down that prevailed everywhere, on the railways and in industry alike, and the loss in labor efficiency, we were facing a new problem and one which we now see has developed into something perhaps more serious in many aspects than the problems that were facing us in transportation during the war. Miles per car per day have decreased, the turn-around time per car has increased, both being measures of car efficiency and both being factors to which both the shippers and the railroads contribute, being affected by the volume of business, the detention of industry in loading and unloading and by the time required by railroads in switching service and road-haul movements.

"These factors have changed to a point where we are no longer getting the efficient use of cars that we obtained under the impetus of the war effort and of the necessity for utmost production of every vehicle of transportation and of other instrumentalities of industry and manufacturing. So we find ourselves facing a car shortage, or rather, combating a car shortage. We are not going to meet it without continuing this program of cooperation which was the life-saver of this nation during the war. So I trust that the shippers will see the necessity of continuing to promote to the utmost every phase of activity which is directed toward producing more and better transportation."

Thousands of booklets are issued annually by railways to promote industrial and agricultural development

Beating the Bushes for Freight

Industrial, agricultural, forestry and other departments engage in the development of new sources of traffic



THE measures taken by the railways to meet the post-war competition are described in another article in this issue. The railways realize, however, that no amount of salesmanship, however high-pressure, can induce a shipper to ship a single pound of freight more than he has orders for. There are, though, many sources whereby new traffic may be created and more attention is now being given to such sources than ever before.

The industrial, agricultural, mineral and forestry development departments on most lines have been redoubling their efforts in an attempt to promote this new business. New industries are being eagerly sought, not only in areas that became industrialized only during the war, but also in the older industrialized areas. On many lines, industrial representatives, who formerly were never off their own railway, have recently made nation-wide surveys looking for new industries.

Agricultural, mineral and forestry development departments are, of course, not new to the railways, but there has never been so much scientific study given the subject as now. Such departments are being strengthened and titles hitherto strange to the railway field, such as "chemurgic development agent," are making their appearance more and more frequently. The untapped natural resources of this country afford a fertile field for new traffic. Also, farms now not scientifically managed may be made to produce more and better crops (and more traffic) through the advice and assistance of railway agricultural agents.

Possibly, under new world conditions, foreign traffic may assume greater importance. Many railways have established new foreign traffic departments. Others have sent representatives to South America to study trade conditions there and report for the benefit of shippers and receivers here. Ports normally quiescent in peace-time had their moments of prosperity during the war and are in no mood to lapse into desuetude again. The railways serving such ports are doing all they can to develop traffic through the ports in association with the port authorities.

Industrial Activities Recognized

The valuable contribution made by the industrial departments of the railways to industry as a whole is being recognized currently. The National Industrial Conference Board is making a study of railway industrial departments, with reference to the value they may have to industry; the results of this study will be made available to all members of the conference, with the recommendation that such services supplied by the railways be used to the utmost.

Throughout the country, despite labor difficulties and other deterrent factors, the long dammed consumer demand is making itself felt. Railway departments handling such matters are expanding, studying and analyzing to keep abreast of the new industries which are developing.

Even a cursory study of what the railways have to offer in the way of assisting new industries to locate, and the expansion of established plants, indicates the desirability of using these services. They have been perfected over the years and are at present in shape to render maximum service.

The plans of the individual railways along the lines of new freight traffic development are listed in the following paragraphs.

Atchison, Topeka & Santa Fe—This railway owns many properties that were taken over for various uses in the interest of the war and which are now being returned. They are being made available for industrial use and new industrial areas are also being fostered for outside ownership. Southern California is at present engaged in one of the greatest industrial booms ever experienced and the Santa Fe is assisting materially in this effort. The industrial department has complete data as to available sites, including sources of raw materials, taxes, labor conditions, power, water, climate and schools. The agricultural department is giving special attention to returning veterans and has issued a booklet describing the principal farming and livestock areas in detail. An extended program of cooperation with agricultural organizations has been set up for the post-war period. Among the developments now progressing are the production of sugar beets and potatoes in the irrigated area of Northwest Texas; peanuts and vegetables in South Texas; reforestation in East Texas; potatoes, onions and sugar beets in Colorado; onions and honey-dew melons in

Western Kansas; vegetables in New Mexico; and a variety of fruits and vegetables in Arizona and California.

Atlanta & West Point — Western of Alabama—Georgia—In the area served by these lines soil conservation and soil building programs are under constant study. Farmers are being aided through studies on diversification of crops and scientific farming methods to secure greater production. The area was experiencing increased industrialization before the war and this was accelerated during the war. It is still continuing.

Atlantic Coast Line — The development department is being expanded to keep pace with the industrial expansion in the territory served. An industrial agent with headquarters in New York has been added and the forestry and geology departments now have additional personnel. The agricultural and livestock departments are working closely with federal, state and county authorities in connection with an increased production program.

Canadian National—The department of research and development, and its staff of industrial engineers, make detailed and continuing studies of the natural resources, agencies of production, transportation, finances, etc. Particular attention is given to the industrial engineering features associated with factory location and the results of these researches are made available to industries. The department also has offices in New York, Detroit, Mich., and in London, England, as well as at six key points in Canada. This railway has for many years actively cooperated in the colonization and development of new lands and has carried out a continuing program looking toward more scientific farming and greater production of livestock, as well as increased irrigation of land in Western Canada. The marketing facilities on railroad sidings are being rapidly improved for larger volumes of higher quality farm products.

Canadian Pacific—The industrial development officers are prepared to supply information on transportation, power supply, labor and raw materials to new industries. Close touch is kept with industrial development in Canada and the United States so that all inquiries may be answered regarding available lands or building facilities for warehousing and distribution, taxation and labor conditions. Industrial offices are located at Winnipeg, Man., Toronto, Ont., Vancouver, B. C., and London, England. A special department, with offices in Montreal, Que., and Winnipeg, deals with minerals and natural resources. Mining companies are given information as to properties in mineral areas; help is given prospectors by advising of available districts for the search of minerals; and the early stages of the development of mineral prospects are supervised and assisted. The agricultural department keeps abreast of the latest developments in the production of better crops, seeds and livestock, and this information is passed along to interested farmers.

Central of Georgia—Because more interest is being displayed in the Southeast in agricultural and industrial development than ever before, this railway has recently reorganized and expanded its industrial and agricultural departments. They are actively engaged in rendering assistance to existing industries, farmers, and owners of forests, as well as to prospective clients. The possibilities for increasing export trade through the port of Savannah, Ga., are being explored actively.

Chesapeake & Ohio — The industrial development service exploits a territory rich in natural resources and advantages through national advertising, illustrated brochures and personal contact. These activities are being pursued with increased vigor since the war.

Chicago, Burlington & Quincy—To assist in the location of new industries, this line maintains a complete record of available buildings, sites and raw materials. Studies of proposed irrigation projects and of soil erosion prevention are continuous in order to promote a high plane of farm production and farm income in the areas served.

Chicago & Eastern Illinois — The huge acreage of undeveloped coal fields adjacent to this line are being actively studied and developed. The production of large quantities of corn, wheat, oats and soybeans is attracting industries which process these crops and the strategic location with reference to the center of population of the United States is attracting general industries,

Chicago, Indianapolis & Louisville—Industrial activities have resulted in the location of many new plants along this line in the past year. Some existing plants have expanded their facilities.

Chicago, Milwaukee, St. Paul & Pacific—The industrial department is at present engaged in a complete survey of all lands adjacent to the right-of-way which are capable of industrial development, not only of property owned by the railway but by other proprietors as well. The agricultural department is increasing its efforts to secure the adoption of the best forest and soil conservation practices; better and increased use of irrigation waters; wider and greater production of essential and needed crops; improved marketing and distribution practices; increased demand for range-grown feeder cattle and lambs; and recommended and needed reforestation. Farm, ranch and recreational opportunities along the line are advertised and land seekers are aided in obtaining property desired.

Currently, the department is engaged in the promotion of the following in various areas: Seed and dry peas; malting barley; hemp raising; seed and table stock potatoes; waxy maize corn; lamb feeding; increasing commercial fertilizing and irrigated areas; organizing soil conservation districts; increasing production of flax and other oil-bearing seeds; control and eradication of weeds, insects and animal parasites and diseases, and rotation of crops.

The development of water and agricultural resources of various river basins

Greater production of citrus is fostered by railway agricultural agents

Railway agricultural departments promote scientific farming

is being promoted, as well as the return to agricultural production of millions of acres of cutover and denuded lands. The mineral department is engaged in searches for and surveys of mineral deposits, metallic and non-metallic; including oil and coal, and the utilization and development of such deposits.

Chicago & North Western—The industrial department is now engaged in negotiations for location of industrial projects which, in size, total number and traffic volume, far exceed any previous projects. The department is now assisting in the promotion of five private industrial districts and two carrier-owned industrial districts in the Chicago area and is working with private interests on similar promotional plans in Wisconsin, Nebraska, Minnesota and Iowa. Private industry construction on this railway is expected to reach an all-time high within the next 12 months. The forestry experts are promoting selective logging, reforestation with desirable species, and new uses for aspen and other "weed" varieties of growth. The agricultural department is encouraging irrigation in semi-arid districts, improving soil conservation and diversification of farm crops and has issued much literature on this subject.

Chicago, Rock Island & Pacific—Additional industrial lands are being cleared and industrial districts in major cities are being developed in cooperation with chambers of commerce, industrial realtors and various groups. Full cooperation is maintained with state geologists in the promotion of natural resources. The agricultural department maintains close contact with state agricultural colleges. In addition to improving the quality and increasing the production of crops, contacts are made to provide stable markets for agricultural products. Diversification of crops and expansion of irrigation are also studied.

Delaware & Hudson—The peace-time industrialization program comprises the maximum utilization of all existing plant and industry track facilities; the sale of land for new industries; assistance to such industries by supplying full data as to sites, preparation of property abstracts, title searches, options, deeds, etc.; submission of sidetrack plans and estimates of costs; and contacts with local communities. Current lists of specific agricultural products shipped by producers along the line are available.

Denver & Rio Grande Western—An industrial department established in 1945 has been functioning successfully in the location of new industries. The agricultural department has studied and improved the packaging of agricultural products. Studies along the lines of increasing production and quality have also proved successful. New crops are being tested to determine their adaptability to Colorado and Utah soils. An agricultural exhibit train was operated over the railway three years ago and plans are now under way for the operation of a similar train in 1947.

Elgin, Joliet & Eastern—Serving the highly industrialized area of northwestern Indiana and northeastern Illinois, this line still abounds in desirable locations from the standpoint of low taxes, land values, labor and water supply, as well as accessibility to the principal markets on a competitive basis. These possibilities are being actively promoted.

Gulf, Mobile & Ohio—Strengthened agricultural, industrial and forestry departments are aiding in the development of the Southeast. General industrial agents are situated at both St. Louis, Mo., and Mobile, Ala. Serving a forested area, the railway's forestry department is receiving special emphasis.

Illinois Central—This railway has, as a post-war program, concentrated on agricultural, forest, fuel and water resources. It has promoted the location of new industries and the expansion of existing industries. It has cooperated closely with the post-war planning commissions in the states it serves, particularly as to adapting war plants to post-war needs. Its agricultural department is continuing its soil testing work. The quality of livestock is being improved through the loaning, for breeding purposes, of railroad-owned dairy and beef bulls; also through the establishment of five artificial insemination stations.

While not overlooking the importance of cotton, the I. C. has encouraged a diversification of crops, such as fruits, vegetables and grains. The forestry department has accomplished notable work in perpetuating timber growing and the preservation of timberlands throughout the South.

Kansas City Southern-Louisiana & Arkansas—These lines have been conducting an extensive advertising program, calling attention to the resources, both mineral and agricultural, adjacent to their right-of-way. In view of the industrialization of the territory because of war installations, such advertising campaigns are meeting with considerable success.

Lehigh Valley—The industrial department has made comprehensive surveys of all factors affecting plant location. It supplies information as to the availability of raw materials, labor, wages, utilities, transportation costs and other pertinent data. It is in close touch with chambers of commerce and other civic improvement bodies. So far as foreign freight is concerned, the efficient terminal at Claremont, N. J., used exclusively by the Army during the war, is now being developed for commercial export and import trade.

Louisville & Nashville—A general development department handles all industrial and agricultural promotion. A successful effort is being made to interest potential industries in surplus war plants. Local community organizations are being aided in their industrial promotion activities. The development of crop diversification is attracting most of the attention of the railway's agricultural agents.

Minneapolis & St. Louis—Industrial development work has been a major item in the program for rehabilitation and modernization of this road ever since the present management assumed charge 11 years ago. In addition to its industrial department, traffic representatives, both on and off-line, are encouraged to promote the location of new industries along the M. & St. L., and the railway's advertising is likewise being channeled more and more aggressively to promote this field of activity.

Minneapolis, St. Paul & Sault Ste. Marie—A vigorous advertising campaign to attract new industries is being carried on, and all off-line traffic representatives are familiar with the industrial possibilities along the line. The general agricultural agent has headquarters in a relatively small North Dakota city in the heart of the farming district. Much work has been done as to the introduction of pure-bred livestock.

New settlers are being encouraged for the wheat lands of the West under railway development programs

Missouri-Kansas-Texas—The industrial and agricultural departments of this railway have been most active in promoting the industrialization and increased production of the Southwest. In April two special trains were operated, one for newspaper men from as far away as New York and the other for financial men, to portray to the visitors the possibilities of the territory served by the Katy.

Missouri Pacific—This railway maintains industrial development offices in St. Louis, Mo., and Houston, Tex., and some time before the war established a similar office in Washington, D. C., for the purpose of securing war plants and government industries. The department is now engaged in the study of the new marketing conditions brought about by the shift in population during the war. Successful efforts are being made to find buyers to take over the surplus plants of the government. Studies have been made as to the amount of raw materials available along the line; the type of skilled and unskilled labor; and the availability of power. Merchandise companies are also being aided in finding warehouses geographically located to meet their distribution needs.

Agricultural offices are also maintained in St. Louis and Houston, and a large amount of literature has been distributed containing valuable information as to soil conservation, dehydration processes, dairy development and many other subjects. Dairy experts employed by the railway are cooperating with other interested agencies to develop greater production of milk and better breeding, feed processing and marketing of stock. Other studies now being carried on include the use of hybrid corn; sorghums for silage; development of better varieties of wheat; oats as a winter cover crop; and production of soybeans and flax.

Nashville, Chattanooga & St. Louis—During the war the efforts of the industrial development department were largely confined to contacting prospects and laying the groundwork for the anticipated industrial expansion in the South. These efforts are now producing results; the department has been extended and is working actively with hundreds of industries interested in the establishment of manufacturing and distribution operations.

New York Central—The industrial department maintains current data as to available sites and is prepared to undertake surveys to find locations that will meet special requirements. It has just issued a comprehensive catalogue of available government-owned industrial plants along its lines. The agricultural relations department acts as a liaison between the farmer-shippers and the railway. Recently, this program included the operation of a "Farm and Home Special" demonstration train in cooperation with Cornell university. A booklet on "Finding a Farm" has just been issued, particularly for the benefit of veterans. The department makes continuing studies of production and marketing problems in cooperation with agricultural organizations. The foreign freight traffic department has been materially expanded to serve industries interested in world markets. Offices are maintained both here and abroad.

New York, Chicago & St. Louis—The industrial development department has prepared a series of four booklets covering the five states served, giving accurate detailed information as to the cities, towns and territory, together with sketches, statistical data and maps. A survey of all towns along the line has recently been completed, giving detailed data as to transportation, utilities, labor, as well as educational, cultural, recreational and health facilities. In these studies, each town is treated as a separate entity, so that individual information is available, or a group of individual surveys may be used for comparison. Natural resources maps containing the latest geographical information are available.

New York, New Haven & Hartford—On May 1, 1945, this railway established a foreign traffic department, looking toward the development of the New England ports it serves as post-war clearing agencies for export and import traffic. Also, in the summer of 1945, a department of industrial development was established to conduct an intensive campaign to attract industries into New Haven territory. This is accompanied by an advertising campaign of considerable magnitude, involving newspapers, national magazines, billboards and direct mail, to attract industries.

Norfolk & Western—The long-established and well-organized industrial and agricultural department is continuing its overall program of development, including studies of mineral resources.

Northern Pacific—Sizable tracts suitable for industrial development have recently been purchased and are being developed at Billings, Mont., and Fargo, N. D., to add to the sites already owned. This railway has taken an active part in land settlement and agricultural development since 1877, because, as a granger road, its outlook was closely associated with agriculture. Its post-war program is designed not only to assist farmers already established, but to secure new settlers. It is the purpose to do useful development and educational tasks which other institutions are unable to perform. The settlement of new areas, such as the Columbia basin irrigation project, the Yellowstone River valley and the irrigation development anticipated along the Missouri river, is being promoted. Diversification of crops is encouraged and a project is under way with grain farmers to improve tillage methods for water and soil conservation. The railway publishes and distributes thousands of pieces of agricultural and livestock literature annually and plans expansion along these lines.

Pennsylvania—The agricultural department is expanding its activities in search of solutions for new problems of marketing, processing and distributing farm crops and livestock. Soil conservation practices, including the use of more agricultural limestone, fertilizers and legumes, combined with desirable programs of total land utilization, are being encouraged. Livestock production is being stimulated; new uses of agricultural products in industry are being developed and technological improvements in agricultre and more specialization in individual farm enterprises are being encouraged. The industrial department is now conducting a comprehensive program of research and analysis, including a study of the effects of war-time plant engineering as indicative of future plant construction. Particular attention is being given to the minerals and other natural resources which are required in the manufacture of synthetics, plastics, light metals and chemicals.

Reading—The industrial development department has been enlarged so that it will be in a better position to work with state and city organizations and assist industries seeking plants or plant sites in the highly industrialized area served by this railway.

St. Louis-San Francisco—The industrial department of the Frisco was most active during the war and has continued with intensified development. New industries located along the line amounted to 208 in 1945 and indications based on results of the first quarter of 1946 are that this number will be exceeded this year. The foreign freight traffic department, recently organized, is developing traffic, particularly through the Frisco's gulf port of Pensacola, Fla.

Southern—During 1945, 178 new traffic-producing industries were established on this railway and 65 existing plants were enlarged. The industrial development department has been expanded by the establishment of new offices at Atlanta, Ga., Charlotte, N. C., and Meridian, Miss. The Southern has conducted a vigorous advertising campaign devoted to the industrialization of the territory it served. The agricultural development service has specialized in studies of crop diversification, the growing of specially adapted crops in suitable locations, and finding a market for such crops. It has also conducted a special drive to promote further raising of livestock and poultry. At Memphis, Tenn., the office of general cotton agent was created recently to serve the shippers of this commodity and to facilitate the handling of the traffic.

Spokane, Portland & Seattle—The industrial department is busily engaged in converting from war to peace-time conditions. The territory served received a tremendous impetus in industrial development and in population because of the war, many industries, such as aircraft and shipbuilding, being financed by the government. Since the war, many of these newer plants are stepping out into new lines of production. Many older plants are seeking new locations for expansion to meet the increased needs of the larger population. A labor supply far above that available before the war is attracting new industries to the area, particularly metal-working, chemical and woodworking plants, especially those using waste wood as raw material. The railway is encouraging the development of food processing plants, particularly cold-pack plants for specialty fruits and vegetables. The production of eggs and turkeys and the increase of irrigation is being fostered.

Texas & Pacific—The agricultural and livestock departments are cooperating actively with organized agencies to promote diversified farming, soil building and improved sheep and cattle raising. Truck farming is being encouraged. Disease and insect control programs, both for crops and livestock, are being fostered. Dairying is being developed. The industrial department is completing surveys of T. & P. towns to locate attractive properties, and the industrial possibilities of the area served are advertised in national magazines.

Virginian—The territory along this line is showing a rapid industrial growth. A drive started early in 1945 for new industries is meeting with success. The growing and shipping of tobacco and peanuts is showing a striking development.

Wabash—The industrial department, in view of the strategic location served, has carried on special research. This includes placing all pertinent information before new or existing industries in connection with expansion or decentralization programs.

Western Pacific—The representatives from 19 cities were called in late in March to consider the effects of the increased industrialization of the Pacific Coast. Part of the program consisted of tours of cities on the W. P. which felt the effects of war-time industrialization, so that representatives from other cities might be in position to discuss proposed locations of new industries there. In addition to the industrial agents, all traffic representatives are given a thorough grounding in industrial promotion, while the engineering department is equipped to handle industrial engineering matters. Complete data as to available sites, power, environment, drainage and transportation costs have been prepared and are available to prospective clients.

Locomotive Costs Assuming Importance

The return to peacetime traffic is shifting the burden of freight hauling to the modern steam and Diesel units and better records are needed to evaluate the results

JUST about one year ago—in April, 1945—the railroads, in so far as the transportation of freight was concerned, started to head back toward what some people still like to speak of as "normal." What has happened in the past 12 months raises the familiar question as to what "normal" really is—or even whether there actually is any such thing. In making reference to a normal year we are merely adopting some previous period as a base to look back to and with which to make comparisons. It has become quite popular, on the part of many people in business and in politics, to select a period with which to make comparisons that will make the figures come out in such manner as to strengthen the argument in favor of whatever case it is wished to prove. In discussing the question of freight motive power, in this article, there is no case that needs proof; there is no argument to win. Fortunately, the facts speak for themselves, so, for the sake of discussion and comparison we have selected the year 1929 as our normal year.

Having taken such a step it is only fair to say, at the very outset, that we know quite well there was nothing even resembling normal about the year 1929, but even the time-hardened and war-weary business or railroad man of 1946 would put up a pretty stiff fight for his right to suggest that the conditions of 1929 would seem rather quiet as compared with today.

The Top of the Hill

The year 1929 was the "top of the hill" so far as the traffic records of the pre-depression era were concerned and it may well be that May of 1945 will prove to be the peak of freight operations for some time to come. In that month the Class I railroads handled 145.8 billion gross ton-miles of freight traffic; this compared with 110.4 billion gross ton-miles in the peak month of October, 1929. As has been pointed out on numerous occasions, there was a considerable difference both in the character and the quantity of equipment with which the roads performed the respective services of 1929 and 1945. In the matter of locomotives on the freight roster, there were 6,573 fewer in 1945 and 2,952 fewer active locomotives in the latter year and month. In May, 1945, 84.3 per cent of the inventory was in active service, as compared with 75.3 per cent in October, 1929. How were these 18,803 active locomotives able to handle 35.3 billion more gross ton-miles, in May, 1945, than the 21,755 active units of October, 1929? The answer, now well-known, is more intensive utilization and the fact that the average freight train of the 1929 peak period had 1,940 gross tons, while the 1945 average train had 2,430 tons.

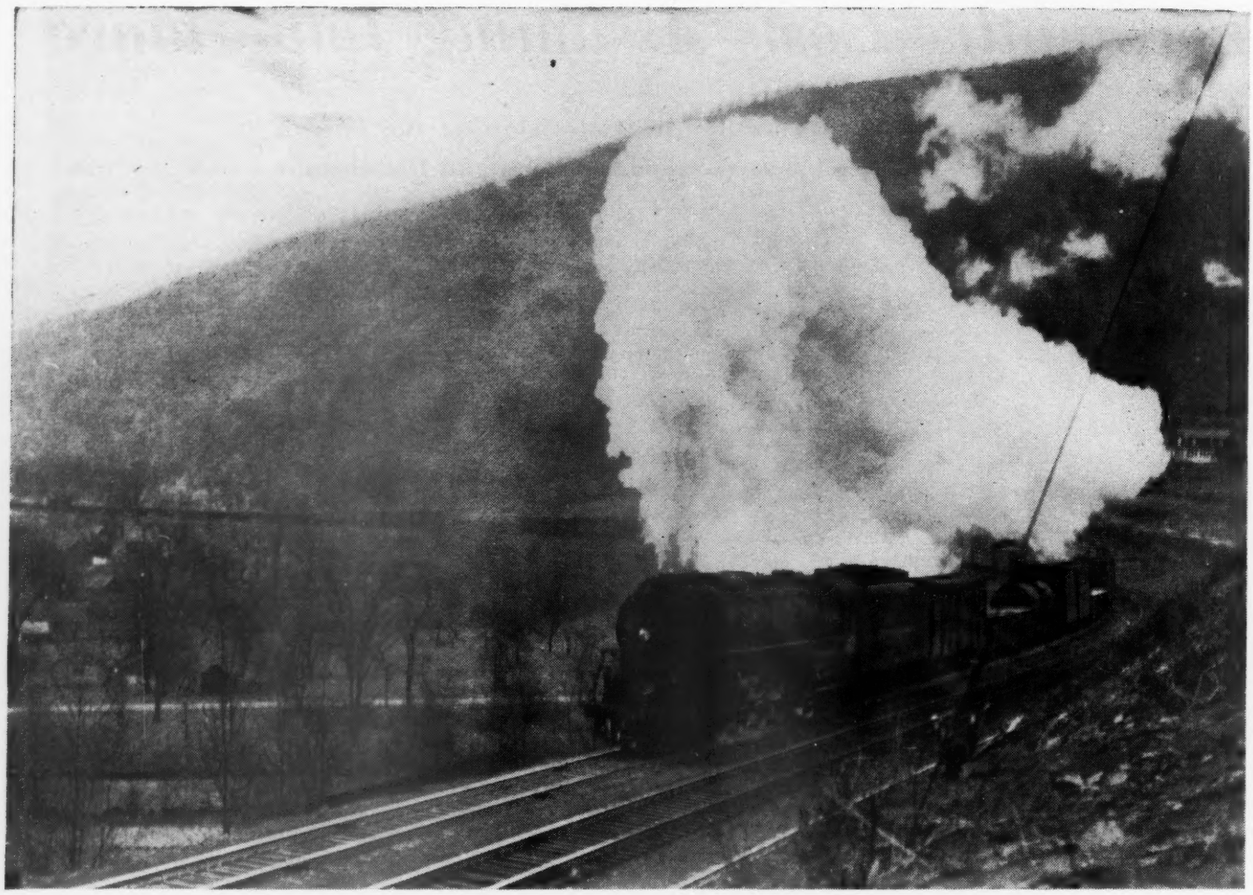
So much for the peak operations. After having set the 145 billion mark as a traffic record, measured by gross ton-miles, operations fell to consistently lower levels month after month to the end of the year, until in the last month for which records are available, January, 1946, it stood at 111.7 billion gross ton-miles, a decrease of slightly more than 23 per cent.

The really interesting fact about the performance statistics of the past nine months, as they relate to the use of freight motive power, is the fact that they show so clearly how changing conditions in the field of freight transportation have affected the record so that when the industry, by the gross-ton-mile measuring stick, looks back to the traffic normal of the peak month of 1929 it finds itself in much the same position as the individual who goes back to the old home town after almost 20 years

Table I—Selected Statistics of Motive Power and Freight Train Performance

	Total freight locos.	Unserviceable	Stored Serviceable	Active locos.	Per cent active to total	Loco. miles (000)	Gross ton-miles (000,000)	Freight train-miles (000)	Freight car-miles (000,000)
1929	1	2	3	4	5	6	7	8	9
October	28,912	4,417	2,680	21,755	75.3	64,756	110,444	56,748	2,785
1942									
October	22,027	2,344	340	19,343	87.8	70,461	141,880	60,717	3,155
1943									
October	22,037	2,703	335	18,999	86.2	70,084	145,076	60,355	3,185
1944									
January	22,351	2,666	310	19,375	86.6	68,927	137,118	59,489	3,020
February	22,341	2,808	307	19,226	86.1	66,547	132,795	57,367	2,913
March	22,291	2,609	264	19,418	87.1	70,993	142,638	61,306	3,165
April	22,265	2,814	341	19,110	85.8	66,868	137,350	57,832	3,043
May	22,316	2,783	436	19,097	85.5	69,279	144,110	59,894	3,167
June	22,199	2,682	498	19,019	85.6	66,136	138,663	57,179	3,044
July	22,253	2,804	495	18,954	85.1	67,478	141,533	58,315	3,115
August	22,334	2,707	493	19,134	85.7	68,149	144,163	59,067	3,157
September	22,388	2,758	462	19,168	85.6	65,106	137,172	56,329	3,002
October	22,398	2,796	465	19,137	85.6	67,946	143,539	58,884	3,115
November	22,457	2,895	483	19,079	84.7	65,095	134,164	56,463	2,961
December	22,432	2,857	430	19,145	85.3	65,492	129,119	56,974	2,844
1945									
January	22,414	2,911	342	19,161	85.3	65,637	127,440	56,885	2,768
February	22,464	2,949	381	19,145	85.0	60,895	122,608	52,747	2,654
March	22,456	2,741	349	19,366	85.9	69,276	143,852	59,901	3,150
April	22,323	2,977	441	18,905	84.7	65,739	138,369	57,080	3,043
May	22,339	3,016	520	18,803	84.3	68,852	145,792	59,939	3,205
June	22,352	2,861	621	18,870	84.3	65,750	139,723	57,155	3,042
July	22,307	3,096	628	18,583	83.3	65,067	136,869	56,547	2,988
August	22,297	3,098	817	18,382	82.4	61,916	128,842	53,895	2,838
September	22,261	3,240	1,121	17,900	80.3	56,907	118,021	49,477	2,576
October	22,311	3,170	1,221	17,920	80.3	57,412	114,445	50,319	2,538
November	22,257	3,199	1,113	17,945	80.6	56,725	113,116	49,424	2,482
December	22,007	3,311	850	17,846	81.1	56,283	106,035	49,124	2,329
1946									
January	22,302	3,050	699	18,553	83.1	57,971	111,686	50,525	2,466

Data in Columns 1 to 4 from I.C.C. Statement M-240 OS-F; Columns 6 to 9 from I.C.C. Statement No. M-211 OS-A; Column 5 calculated.



Above—A 3,500-ton freight train being hauled up a 1.6 per cent grade with a modern 4-8-4 steam locomotive and 2,700-hp. Diesel-electric pusher. Below—The rear end of the same 116-car train with the 2,700-hp. Diesel pusher

and finds little that he recognizes. In these oft-repeated facts—smaller locomotive inventory, greater proportion of locomotives in active service, higher train speeds, heavier train loading, greater locomotive capacity, ability of locomotives to run more hours and more miles without servicing—lie the story to which this entire issue is dedicated, progress in freight transportation.

The Battle of the Giants

The fierce competition going on at the moment between the Diesel-electric locomotive and the steam locomotive for supremacy in the hauling of trains is actually but a matter of competition between motive-power types that have two basic factors as their ultimate selling points—their capacity for round-the-clock service, otherwise known as availability, and their efficiency in the use of different kinds of fuel. If those who have responsibility it is to establish the motive-power policies for our railroads but recognize it, the referee in this competition is the factor of economics. With a declining traffic volume, coupled with increases in wages and in the cost of fuel, there is every indication that we are in for some surprises and that the railroad management which ignores a careful consideration of sound economics is in for some rather severe headaches in the days ahead.

So far, as the statistics of the past nine months will show, railroad managements have done an excellent job of adjusting the assignment of power to the rapidly shifting requirements. Having learned by the experience of wartime traffic that the modern power unit, whether it be Diesel or steam, is capable of so much more service than the older units, the burden of the traffic-handling job has been shifted to the newer locomotives. This has been true to such an extent, on many roads, that, once again, we are forced to call attention to the fact that the overall statistics of freight performance fail entirely to reveal what actually is going on. As a general rule, the old and obsolete units of steam power are either being stored or retired as their mileage is run out and the modern steam and Diesel locomotives have taken their place to such an extent that it is not uncommon to observe the bulk of the main-line traffic on some roads now being hauled by locomotives of less than 10 or 15 years of age.

The Influence of the Diesel

At the beginning of this year there was approximately one and one-half million horsepower of Diesel-electric freight locomotives in service on American railroads. About one-fifth of this went into service during 1945. The amount of Diesel-electric freight-locomotive mileage has quadrupled in two years and in the 12 months of 1945 this type of power accounted for five per cent, or 38.1 million locomotive-miles, of the Class I total of 750 million freight-locomotive-miles, 93.2 per cent of which was run by steam power. Table II shows that while all locomotive mileage, irrespective of type, showed an increase in 1944 as compared to 1943, both the steam mileage and the electric locomotive mileage decreased 9.3 and 6.2 per cent, respectively, in 1945 as compared with 1944. The Diesel-electric mileage, however, continued its gains, with a 76.7 per cent increase in 1945 over 1944. Representing, as it does, but a small fraction of the more than 22,000 freight-locomotives in the inventory at the beginning of this year the Diesel-electric group, of necessity, had to turn in an unusual performance to have such a tangible influence on the statistics of locomotive performance.

Table II—Comparison of Freight Locomotive Mileage by Type of Power

(Year Ending December 31)

	1945			1944			1943	
	Miles (000)	Per Cent of Total	Per Cent Change	Miles (000)	Per Cent of Total	Per Cent Change	Miles (000)	Per Cent of Total
Steam	698,305	93.2	−9.3	770,267	95.5	+30.0	592,493	97.3
Diesel-Electric	38,149	5.0	+76.7	21,588	2.7	+103.6	10,602*	1.7
Electric	13,570*	1.8	−6.2	14,468*	1.8	+124.4	6,448	1.0
Total	750,024	100.0	−6.9	806,323	100.0	+32.0	609,543	100.0

* Includes gasoline and other locomotives.

Note: Data from I.C.C. Statistics of Freight Train Performance, Statement No. M-211 and Statistics of Passenger Train Performance, Statement No. M-213.

Better Cost Data Are Needed

There are plenty of people in the railroad industry today who are ready to hang crepe on the door of the steam locomotive and if there is any one thing under which that type of motive power is laboring at a distinct handicap it is in the matter of costs. There is hardly a month goes by in which a new report or a new technical paper is not made public containing comparative cost figures for Diesel and steam operation. The ink is hardly dry on these figures before the fireworks begin and any value that they might have is too often dissipated by the aspersions that are directed at their accuracy. It seems about time, now that the pressure of wartime operation is over, that the railroad operating and mechanical departments did some constructive thinking about the matter of costs. By virtue of what process of reasoning can anyone justify the comparison of steam and Diesel costs on many roads when the manner of keeping the cost records and the method of making the comparisons is analyzed? One railroad officer recently challenged the suggestion that the comparative statistics were not accurate and fair and asked in what manner changes should be made. Naturally, three items of operating expense stood out above all others: wages, fuel and repairs.

As matters stand right now, whatever changes affect the wage scale will affect both steam and Diesel operation and the ultimate effect on the cost of locomotive operation will be influenced largely by the manner and extent of the use of these two types of power.

The matter of fuel costs opens up a veritable riot of controversy. Take the matter of the fuel equation, for instance. Of just what real value a fuel oil-coal equation is it is rather difficult to discover; there seem to be about as many ways of arriving at an equated value as there are people to calculate it. But of one thing there is some certainty: that the actual amount of coal required to haul a 5,000-ton train 100 miles on a level tangent track is quite a different matter than the amount needed to haul the same train over a mountainous crooked right-of-way. Then, too, modern, high-capacity steam locomotives might easily turn in a fuel performance on the latter railroad that would make old and obsolete power on the level, straight railroad look pretty bad by comparison. When both of these roads add Diesels to their inventory the actual locomotive operating comparisons are going to be of new Diesels and new steam locomotives in one case and new Diesels and old steam power in the other case.

How are the fuel records for steam power developed? Is the actual tonnage of coal weighed at terminals with the same degree of accuracy that Diesel fuel is metered upon delivery to the fuel tanks? Is the locomotive in which the coal is burned of such design and condition as to utilize the coal efficiently throughout the entire horsepower range? Of course, everyone experienced in steam-locomotive operation knows the answer but it is too often forgotten when management calls for comparative figures on steam and Diesel performance.

Those who like to argue against the Diesel quite frequently draw attention to the prospect for substantial increases in the cost of fuel oil. It might be appropriate to point out that while, at this

writing, the ultimate effect of John Lewis' maneuverings in the bituminous coal field are still unknown, it is reasonably certain that solid locomotive fuel will eventualy cost more money per ton. So, also, will fuel oil eventually find its way to higher price evels.

The comparison of fuel costs may be illustrated by a road where the price of coal is $5 per net ton and the fuel consumption in freight service 120 lb. per 1,000 gross ton-miles. The cost of coal in this case is 30 cents per 1,000 gross ton-miles. If that road's Diesel-electric freight locomotives use 1.5 gallons of fuel oil per 1,000 gross ton-miles the fuel cost per 1,000 gross ton miles, with oil at 6 cents per gal., is 9 cents. If the price of fuel, both coal and oil, goes up 10 per cent and the locomotive consumption rate remains the same in each case the steam locomotive fuel costs will rise 3 cents per 1,000 g. t. m., while the Diesel fuel cost goes up only .9 cent per 1,000 g. t. m. On a single division of the same road the actual fuel saving of the present Diesel operation over that of the steam formerly used is enough in one year to pay the fuel oil bill, at present traffic rates, for more than two years.

Repair Cost Variations

One road, actually operating just about the above-mentioned traffic volume with about 70,000 hp. of Diesel-electric freight locomotives estimates that with a 10 per cent increase in the price of both coal and Diesel oil the annual savings in favor of the Diesel would be approximately $1,500,000, based on 94 lb. per 1,000 gross ton-miles on steam power with coal at $7.70 a ton and 1.59 gal. of 7.1-cent oil per 1,000 gross ton-miles on Diesels. So it appears that until some decidedly more efficient method of generating and using steam on a locomotive is developed the steam locomotive will usually remain at a disadvantage in the matter of fuel cost.

The repair expense item, with respect to steam and Diesel locomotives, is a matter that does not lend itself to as nearly exact calculation as does the fuel item. A recent report of an A. R. E. A. committee includes data on the influence of age on Diesel freight-locomotive repair costs and shows 7.97, 11.63, 15.48 and 20.80 cents per 1,000 gross ton-miles for the first to fourth years of service, respectively. The same report shows Diesel freight locomotive repair costs, per locomotive-mile, of 20 cents and 23 cents, while steam repair costs are shown at 30, 44 and 74 cents per mile. No indication is given of the age, type or condition of the steam power.

Is this a fair comparison? Let's look at another comparison, in this case on a road that handles its main-line time-freight jobs with both Diesel and steam. In this case both types of power are modern. The steam locomotives are the 4-8-4 type, all less than 12 years old. Half of them are equipped with a full roller-bearing installation, while the remainder have roller bearings on the engine and tender trucks only. These locomotives are about 4,800 hp. The Diesel road engines are 4,050 hp. and the pushers, 2,700 hp. In 350 miles of line on that road there are 15 miles of 1.5 to 1.9 per cent grades, over 40 miles of 0.9 to 1.2 per cent grades and many 6.0- and 6.5-deg. curves. The repair cost for the Diesels is 15.2 cents per locomotive-mile for the 4,050-hp. road engines after a year of operation in which the maximum mileage for any individual locomotive is 154,000—this is the total mileage for that locomotive since it was placed in service. In the same service, handling the same runs, the 4-8-4 steam locomotives showed a classified repair cost, after 250,000 miles of service, of 9.7 cents a locomotive-mile for the roller-bearing engines and 15.6 cents for the plain-bearing engines; this on locomotives from 5 to 12 years old.

A glance at these random selections from repair-cost quotations shows the fallacy of trying to make comparisons unless all factors are taken into consideration and the costs related to specific operating conditions.

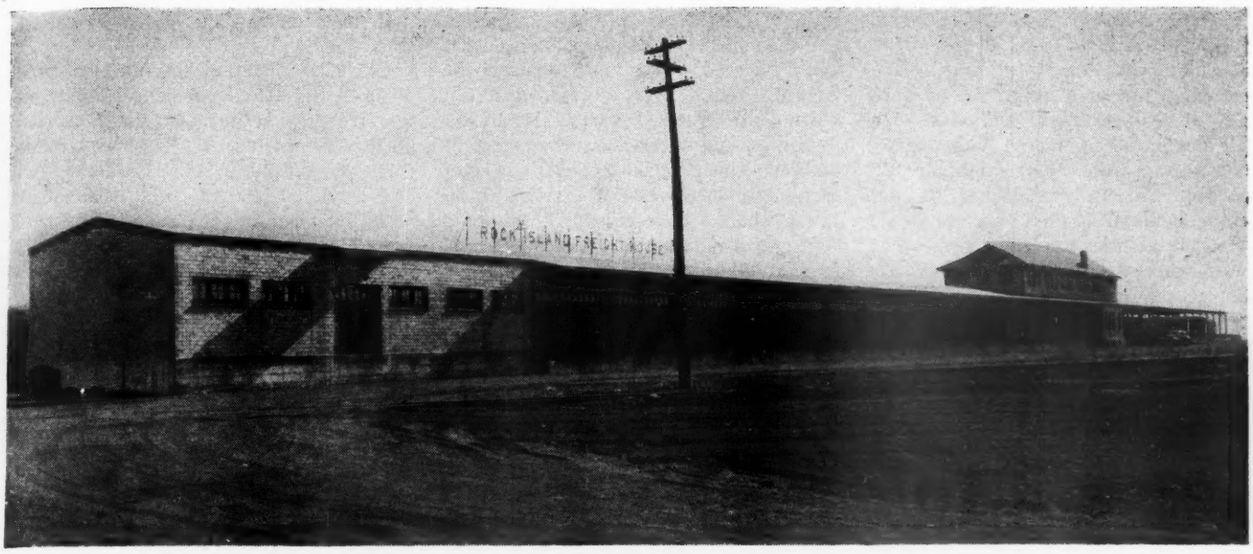
First cost has been a factor in which the steam locomotive has enjoyed a distinct advantage since the Diesel entered the picture, but, if the initial costs of modern steam units, of either conventional or improved design, continue to increase at the rate which they have in the past five years, and the initial cost of the Diesel continues to decrease with the increase in the number built, the spread between the two will be continually narrowing. The steam locomotive, because of certain disadvantageous characteristics, cannot afford a very much higher horsepower cost before it crosses a boundary where it loses it advantage in handling traffic where train-mileage density is low or schedule arrangements unfavorable to high locomotive mileage.

In the entire matter of costs it has long been considered uneconomical, in the light of accounting expense alone, to keep accurate steam locomotive costs on a locomotive-unit basis because of the large number of units involved. And yet, every road operating Diesel locomotives is starting out on just such a basis. The advantage of this is immediately apparent and there is little guesswork in the matter of Diesel operating costs. Possibly the same detailed attention to steam operating costs might not only reveal a course to economies not now realized but might so emphasize the decided disadvantage of continuing in service obviously uneconomical steam power as to dictate a decided change in our attitude toward the entire motive-power problem.

* * *

British Combine Photo

The new electric tea "trolley" which has been put into service at Waterloo station by the Southern of Great Britain. The first of 12 for use on that road, it is the result of joint efforts by the company and the Empire Tea Bureau



A new freight house, typical of those planned or under construction

Railways Seek L.C.L. Traffic

New freighthouses, through cars, speedier handling of both freight and waybills improve services to shippers

THE war-time growth of less carload traffic on the railways from annual revenues of $247,610,899 in 1940 to $374,130,598 in 1944 and to $385,958,188 in 1945 has led many railway officers to a re-examination of the roads' l. c. l. traffic policies and to a realization of the earning potentialities of this type of traffic. Although l. c. l. traffic contributes only a small proportion of total freight revenue (5.1 per cent in 1944), because of the relatively high rates applicable on this class of traffic this revenue is contributed by an even smaller portion of the tonnage (1.4 per cent in 1944). Because of these facts virtually all railways are taking active steps to improve their l. c. l. services and allied station operations.

Through the war years the roads recovered much of the l. c. l. traffic which they lost to competing carriers during the depression, although neither revenues nor tonnages have yet reached the levels of 1930 and the years before. The railroads' recovery of this traffic was due in part to war-time restrictions on motor truck operation which diverted much traffic to the railways (although it is true that the minimum load requirements of O. D. T. order No. 1 also cost the railroads considerable traffic by reason of delays to freight held because of lack of sufficient tonnage), and in part to reduced production of civilian goods, which caused small-lot distribution of many commodities normally distributed by the carload. A final factor, and an important one, was the stability of rail l. c. l. rates in a period of generally increasing prices. That last factor is one which cannot be ignored either by railway employees or by their representatives, for it must follow that only to the extent that rail costs can be held relatively low while the service is being steadily improved, can the roads hope to retain their present high volume of merchandise traffic. Recognizing this, managements of railways in all parts of the country have started campaigns to improve l. c. l. services and reduce costs.

Experienced Employees Return

Foremost in the improvement in l. c. l. services is the return and retraining of experienced employees who have been in military service. During the war years there were all too many points at which the man-power situation was such that in spite of the long hours worked by many faithful employees it was necessary to recruit freighthouse employees on a daily basis from among the human derelicts of the nation's cities. Such a labor force, inherently unsatisfactory because of the natures of the men themselves, was even less efficient because of its lack of stability. On many freight platforms it was rare to see the same employees on successive days. Under such conditions freighthouse efficiency reached a near-record low point while service virtually disappeared.

Today that situation is almost completely changed. Reliable, experienced employees have returned to the freighthouses, men who know how to perform their tasks and who realize that the future stability of their employment lies in their ability to serve the railroads' customers courteously and efficiently. Management, for its part, is aiding these returning employees to reorient themselves. As an example of the trend in railway thinking today, the New York Central has begun an intensive course in the training of supervisors of all types, including those employed in station service. Particular emphasis, in this program, is placed on the necessity of courteous treatment of shippers and prompt attention to their needs, with the realization that even if shipments go through on schedule and undamaged, customers may be lost unless the station and other employees let them know by word and deed that their traffic is valued highly.

In the realm of physical improvements, the carriers have already done much, but are doing more. During the war only a few new freighthouses were built. But since V-J Day plans have been announced for many, with numerous contracts for construction already awarded. Generally speaking, in designing a new freighthouse, more ample driveway facilities are among the first considerations, to make motor truck access quicker and more efficient. Often the new freighthouses are located on property some distance away from other buildings and on private roads so as to avoid congestion, it no longer being necessary to place freight stations close to congested areas to accommodate slow-moving horse-drawn vehicles. A second consideration in the design of new freighthouses is wider platforms to allow free circulation of freight trucking operations in the station itself and to permit the use of mechanized equipment. As a part of this plan, wide island platforms are usually provided, accessible by aprons around one end, or by bridges over the tracks, or both, to make trucking through freight cars unnecessary.

Freight Kept Moving

Perhaps not a new idea in freight station design, but one nevertheless effective, is the provision of only limited storage space. One western road which completed a new freighthouse in Chicago last year provided only a single small storage room for freight. When asked how the station could get along with only space to store the freight from two or three cars, both the agent and the supervisor of merchandise service answered, "We don't store the freight. We deliver it or load it out when we receive it." That is the rapidly growing idea among railroad freight station supervisors today. Deliver freight at once when it arrives. Load it out when it is received. By so doing the freight movement is expedited, congestion eliminated, costs reduced, and the customer gets what he pays for—service.

As has been indicated, many roads have introduced mechanized methods into their station operations. Electric or gasoline-driven tractors pulling four-wheel trucks have been used in the larger stations for many years and with good results, while recently three-wheeled gasoline-driven platform trucks have been adopted in some freight stations. Other devices which have found favor in freight station operations are power-operated mobile cranes capable of handling heavy shipments of one and two tons in a fraction of the time required when rollers are employed and with far less risk of personal injury. Other roads are experimenting with fork-lift trucks to stack freight in cars, while at least one is trying out the "pallet" method of handling freight between certain stations. Even where hand trucks are used (and regardless of the number of mechanized units in service at any station, hand trucks are still necessary) there have been improvements. One road found that by making hand trucks wider freight could be handled with less damage because cartons did not fall off the truck so readily, and the wide truck is now standard on that line.

But mechanization has not been confined to the actual physical handling of the freight. It has also been carried to the freight office itself. Many roads have adopted the practice of micro-filming waybills, bills of lading, and other vital documents as a means of insuring accurate records in a minimum of time. Where such a device is used along with the reorganization of certain office routines great time savings can be achieved.

Faster Paper Work Too

Another device that is finding wide acceptance in speeding the handling of freight bills is the teletype. Several roads now are loading freight by the shipping order, then releasing the cars without waiting for billing. Where long-distance cars are involved, the bills are forwarded by company or United States mail in passenger trains, but where overnight merchandise cars are handled in this manner, the waybills are teletyped to the destination agents, arriving there hours ahead of the cars. In either case station forces at the point of origin can work in an orderly manner without the necessity of undue haste which can frequently lead to errors, while the employees at destination can have freight bills, delivery receipts and handling instructions prepared in advance to permit immediate working of the cars on arrival.

Along with improved facilities, the railways are constantly studying their freight station organizations and operations, striving to find faster, more accurate and less expensive ways of doing paper work and handling freight. The application of certain machines to office work has already been mentioned, but it is only when the work itself is reorganized properly that the full advantage of the machines can be achieved. For example, in the use of Recordak for micro-filming of station records, if the shipping order can be used to accompany the shipment to destination, with a photographic copy being kept for record and accounting purposes at the origin point, the time and expense of preparing a waybill are virtually eliminated, and in addition the chance of error through a mistake in billing disappears. Many roads are now using this system for local shipments with

Use of micro-film to photograph waybills at the rate of from 35 to 60 waybills a minute gives an exact copy of the waybill or shipping order as a permanent record, yet does not delay movement of the freight while the bill is transcribed. the clerk in this picture is abstracting a waybill by the use of a Recordak viewer

considerable benefits both for l. c. l. and for carload freight.

Another method of accomplishing this same result has been achieved by an eastern line through revision of its bill of lading, shipping order, waybill, station record and delivery receipt forms. A form has been devised which permits all required records to be made when the original bill of lading is made. Again there is considerable saving in time and expense and the almost complete elimination of any chance for errors except those which may arise when the shipping order is first made out.

Reports Eliminated

Until recently the accounting departments of most lines required that a written abstract of every interline shipment be made, both on receipt from, and delivery to, connecting lines in order to check on revenue settlements. In recent years, however, there has been a growing realization that this is a time-consuming and expensive process, which, although necessary in some instances, produces no revenue and frequently delays the movement of traffic. Accordingly there has been a drastic revision in practices in this respect. On many roads abstracts of interline waybills on shipments weighing less than 5,000 lb., have been done away with entirely. On others it has been found that a passing report made either at on-coming or off-going junctions will serve as well as reports made at both, and one report has been eliminated entirely. Where micro-film machines are available waybills are photographed as received, and passing reports are made out during slack hours, allowing the freight to move without delay and better utilizing the time of the clerical forces.

In the matter of loading cars, the carriers are constantly searching for better methods. One road has recently added 30 claim prevention inspectors to its staff. These men will be primarily concerned with the reduction in loss and damage and will necessarily devote much of their time to supervising the loading of merchandise cars at stations on that road. At least two others have employed trained packaging engineers who will actively work with shippers to devise better methods of packing their freight for shipment. Acting cooperatively, the roads, through the Freight Claim division of the Association of American Railroads, are working on plans for a comprehensive training program to educate station employees in the proper methods of handling freight. Marking, checking and billing will be stressed in this program, as well as proper loading methods.

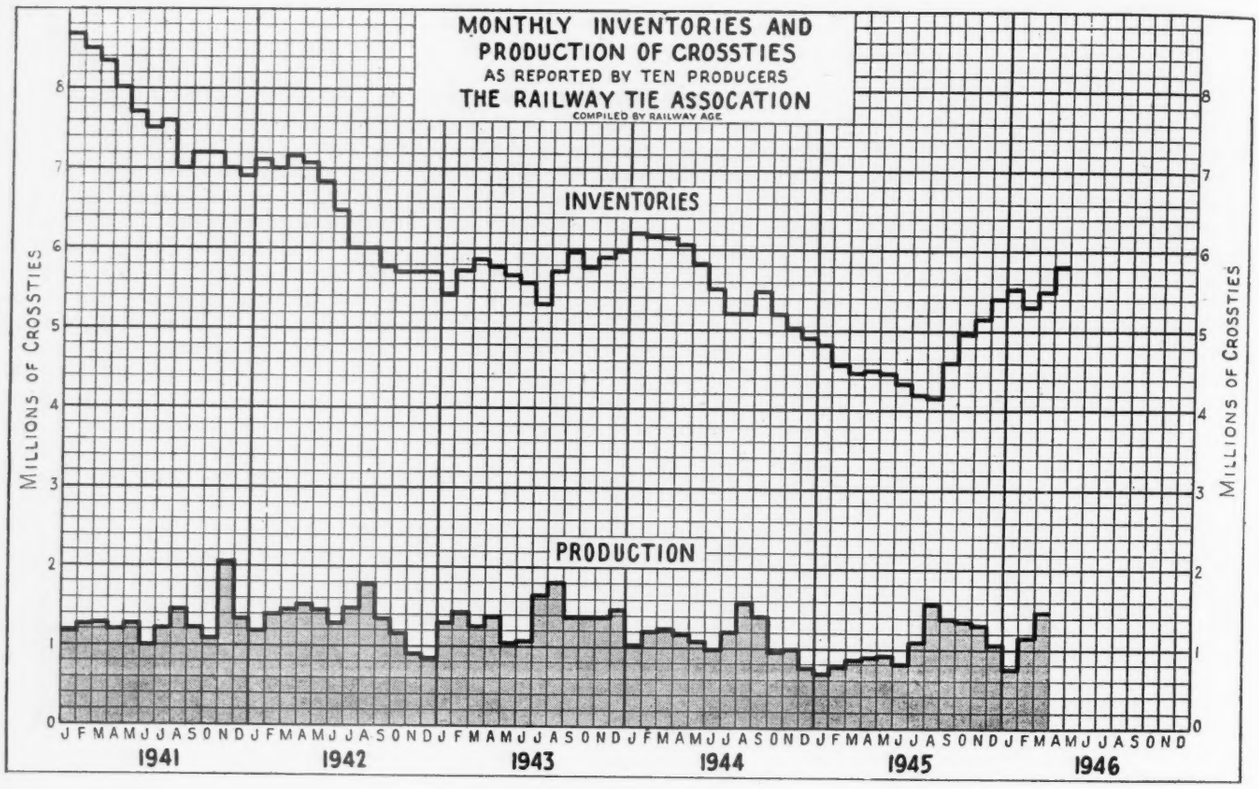
Most roads are using some device to protect freight from shifting in transit where cars are not loaded to full cubic capacity. Some use stowage gates, others steel bands, while still others use a combination of these methods. Almost universal is the practice of segregating the heavy, rough freight from package goods, placing these classes of freight in opposite ends of the car to prevent damage to the lighter articles.

The operation of fast merchandise trains is discussed elsewhere in this issue, but closely allied to this subject, yet an integral part of station operation, is the scheduling of through cars. Although such cars have been in operation for many years, certain practices were developed during the war that are being permanently adopted because of the large savings in transit time and in cost which they effected. Formerly it was common practice to run through cars between the larger cities, transferring interchange freight to other roads at those points either by truck or by trap car. Labor shortages and freighthouse congestion in some of these centers, however, forced a search for ways to by-pass such points, and on many roads the practice of forwarding through cars to an agreed transfer point on a connecting line, remote from larger terminals, was agreed upon with outstanding results.

Today, for example, there are many cars operated between the East and the West which by-pass Chicago, St. Louis, Mo., and Memphis, Tenn., freighthouses, as well as smaller terminals, thereby saving as much as 48 hours transit time. Where tonnage considerations will not permit the cars to by-pass the cities themselves, through cars are handled direct to connecting lines' freighthouses at the interchange point, thereby eliminating the time and expense consumed in transferring the freight. Although the minimum load provisions of O. D. T. order No. 1 are still in effect, many roads have completed studies and made plans to operate additional through cars or additional traffic lines as soon as the car supply will permit the operation of cars under somewhat lighter loads.

In summation, it may be said that many railway traffic and operating officers, as well as executives, have openly acknowledged a reversal in their basic policies toward merchandise traffic. Far from being something that must be endured because it could not be dispensed with, l.c.l. has now become a type of traffic that is much sought after. In line with this reversal of policy has come a thorough revision of operating practices designed to reduce costs and improve services—to the end that the shipper's merchandise may move more quickly, dependably and safely at the minimum cost.

Mechanized units speed the loading and unloading of cars, reduce handling costs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AS REPORTED BY TEN PRODUCERS
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Procurement Problems Multiply

Strikes, falling production and material shortages have added to purchasing difficulties, but seasonal increase in crossties promises lone ray of hope in the dark forest product picture

DESPITE the fact that the first anniversary of the end of the war in Europe has come and gone, substantial shortages in practically every line of railway materials, equipment and supplies still focus the spotlight of management on the railway purchasing and stores departments. Moreover, because of the many basic factors involved in the entire situation and the rapidity with which they change, any general summary of railway procurement that is prepared well in advance of a publication date usually is at variance with the facts by the time that the reader receives the issue containing it.

At this writing, the most disturbing influence is the dislocation resulting from the coal strike and its influence upon so many railway supply industries. Although the miners went back to work in time to avert a complete shut-down of the steel industry, production was still affected when this issue of *Railway Age* went to the press. Although railway procurement officers have had considerable experience in change and flexibility during the period of war-time buying, which involved dealing with new materials, new types of contracts, constantly changing regulations and abnormal conditions of business, few at the war's end thought that such uncertainties would be protracted well into the first half of 1946.

Lumber Situation Chaotic

Because of many ramifications of labor difficulties, strikes and the closing of manufacturing plants because of the lack of materials, general railway procurement problems are even more acute today than at any time since Pearl Harbor. By reason of the general chaotic condition of the lumber industry, the procurement of all forms of lumber and timber is one of the knottiest problems now facing railway purchasing agents. Many railways have been forced to postpone various projects because of these conditions and many other roads are living from hand to mouth insofar as lumber products are concerned.

Fortunately, there has been some relief in the crosstie situation insofar as this year's production is concerned; and seasonal increases have brought more optimism. On the other hand, low stocks in seasoning yards have complicated 1946 treatment with the result that many roads have been forced to adopt accelerated seasoning processes, in conjunction with preservative treatment, in order to eke out tie supplies for this season's renewals.

The other side of the tie picture is blacker than ever, for under present price regulations of the Office of Price Administration, the production of switch ties in practically all areas has reached an almost irreducible minimum. In many territories production has ceased almost

entirely and the mills that formerly cut switch ties are sawing their logs into lumber because, that way, they can obtain considerably higher prices.

It is true that foresight and adaptability are still the measure of competent purchasing, but, at the same time, abnormal conditions and price control, particularly with respect to forest products, present many new and ever-changing phases with which railway procurement officers must contend at a time when normal supplies of so many different items are badly disrupted.

Sharper Cuts in Steel

On May 10 the American Iron & Steel Institute reported that more than 1,500,000 tons of steel production had been lost from April 1 up to that time because of the strike in the coal mines. At the beginning of the week starting May 6 the industry was operating at 58.7 per cent of capacity, and declining coal stockpiles were causing serious doubt whether even partial operations could be continued to the end of May. The so-called independent mills generally maintained a higher rate of operation, up to the time the miners were ordered back to work for a 2-week period, than did the producing units of the U. S. Steel organization.

In the nine months following the end of the war the steel industry, because of strikes, was able to turn out only 47,226,000 tons of ingots and steel for castings, or 18,634,500 tons less than were produced in the same period in 1944 and 1945.

Operations of ore vessels on the Great Lakes and of mines in the Lake Superior district also were curtailed by the coal strike, and many men were laid off. Steel mills that had shut down did not resume work in advance of a definite settlement of the miners' strike. Production losses have been most noticeable in rails, bars and plates among major products, though the decline is being rapidly extended to light flat rolled steel. The supply situation is further complicated by the fact that even upon conclusion of a definite settlement of the coal dispute and the resumption of steel production, it is anticipated that at least three weeks will elapse after the settlement before normal output can be resumed. This outlook is based upon experience following the settlement of the recent steel strike and the subsequent resumption of activities last winter.

The full impact of the steel and coal strikes may be measured by the 7,500,000 tons of steel ingot production that was lost because of the steel strike earlier this year and 1,000,000 additional tons (up to the end of the first week in May) because of the coal strike. The loss of 8,500,000 tons of raw steel is equivalent to the disappearance of approximately 5,900,000 tons of finished steel, or to the total shipment of steel to the entire automotive industry during the year 1939. Hurriedly prepared plans of the Civilian Production Administration have involved the return of two steel executives to C. P. A. headquarters in conjunction with plans for enlarging that agency's steel branch to meet emergency needs.

Among the more impressive developments in post-war competition has been the interest aroused among buyers by the sharp rivalry between galvanized and aluminum roofings from a price standpoint. Present indications are that aluminum roofing will press galvanized closely even when the latter becomes more plentiful, because the chances are that the price differential will be relatively small.

In the non-ferrous field, order backlogs for copper and brass products are seriously behind schedule. In view of the fact that more than 50 per cent of the domestic mine production is closed, it seems probable that the shortage of copper will be reflected in a larger curtailment of brass mill production than has been apparent. The present situation parallels the strike, wage and price difficulties in the steel industry approximately three months ago. "Fact finding" boards have been established to study wage and price structures of copper mines and smelters and price increases have been granted to brass mills. Although the shortage of lead is equally as important as that of copper, O. P. A. apparently is attempting to set a pattern in the non-ferrous metal industry by its action in copper, with the result that action may be delayed some little time.

The general brake shoe situation during the past six months has been largely a matter of nip and tuck, with low production in the early part of the year, and even prior to the steel strike inventories of brake shoes in the hands of both consumers and producers were uncomfortably small. At that time, current production was just about meeting the demand of the railroads; but the steel strike greatly aggravated the situation and reduced inventories to approximately a week's supply compared with a normal inventory of 60 days in both railroad shops and foundries. Because of the prevalence of setting out cars by many railroads, the Interstate Commerce Commission has urged that every effort be made to increase sharply production of brake shoes.

The most limiting factor in this situation has been the inability of brake shoe companies to obtain necessary steel bars, sheet and strip, with the result that C. P. A. granted and will continue to issue "directives" to provide brake shoe manufacturers with adequate supplies of steel. On March 15, for instance, it was reported that approximately 85 per cent of the steel immediately needed for railroad brake shoes had been scheduled at the steel mills and C. P. A. was awaiting the necessary detailed information to place directives for the remainder. The coal strike has complicated matters to such an extent that the lack of an adequate supply of brake shoes, in many instances, has become one of the larger headaches of railway procurement officers.

Crosstie Production up

The one encouraging feature in the entire railway supply situation is the March production of crossties as reported by ten producers in the Railway Tie Association. During that month production totaled 1,460,000 crossties, an increase of 24 per cent over February and 65 per cent above January, 1946. This also reflects an increase of 70 per cent over the same month in 1945, almost 18 per cent more production than in March, 1944, and 17 per cent more than during the same month of 1943. Production by these same companies during the first quarter of this year amounted to 3,520,000 crossties, an increase of more than 52 per cent over first quarter production in 1945 and one per cent more than during the first quarter of 1944. However, it was 11 per cent below production for the first quarter of 1943 and almost 13 per cent below the corresponding period in 1942.

Inventories of crossties on hand by these same companies amounted to 5,800,000 on April 1, which is the highest stock for any month since May, 1944.

Insofar as all other lumber products are concerned, the supply situation has gone from bad to worse—with the result that procurement of these products is now more difficult than at any time during the past three or four years. Because of inconsistencies of O. P. A. regulations, the general production of switch timber has been practically wiped out and, although it is anticipated that most roads will be able to squeeze through 1946 insofar as switchtie replacements are concerned, the prospects for 1947 timber are dark indeed. Furthermore, the present difficulties extend to almost all other forms of wood products including lumber and timber for maintenance and construction purposes.

Should O. P. A. Be Ended?

In summarizing the situation during his testimony before the House banking and currency committee a short time ago, Richard A. Colgan, Jr., executive vice-president of the National Lumber Manufacturers' Association, declared: "Our position in the matter before you may be expressed in one sentence: the dilatory, unrealistic, inconsistent and almost confiscatory methods of the O. P.

A. in the pricing of lumber are the major cause of the large and tragic decline in the production of lumber today, and we recommend the complete elimination of all O. P. A. price controls in this industry if maximum production of lumber is desired."

H. V. Simpson, executive vice-president of the West Coast Lumbermen's Association, summarized his testimony at the same hearing in this manner: "Our operators have been and are strong supporters of inflation control, but they now wonder whether it is better to have inflation with O. P. A. or inflation without it. Reluctantly we have concluded we prefer full production without O. P. A. to limited production and doubtful inflation control with O. P. A."

American lumbermen are almost unanimous in their opinion that price disparities are the root of the railroads' lumber difficulties, although by no means the only factor in the entire situation. The fact remains that inventories and production of lumber are inadequate to meet all the demands and the situation is further aggravated by maldistribution and black market operation. The Office of Defense Transportation and the Civilian Production Administration are pressing for a solution of railroad lumber problems, and actions are looked for within the near future which will indicate a beginning in correcting the present situation and to insure deliveries that will alleviate it to the extent of allowing at least a partial resumption of necessary maintenance and construction work.

The lumber industry is not alone in complaining of the restrictions that have been imposed through government price policies. Large as well as small manufacturers have had to discontinue some products because of the inadequacies of price ceilings. Not long ago a prominent research corporation indicated that a comprehensive survey of a representative cross-section of small and medium size manufacturers in the concentrated industrial area east of the Mississippi and north of the Mason-Dixon line revealed that 70 per cent of these manufacturers said that price ceilings are injuring their business; 63 per cent said that O. P. A. price ceilings have been unrealistic in regard to costs; 44 per cent said they have had to stop marketing some products because of price ceilings; 51 per cent reported they have had to curtail production of certain lines because of price ceilings; 40 per cent said they will be forced to curtail or eliminate products if price ceilings remain as they are, 36 per cent of this group declaring that they would have to shut down their plants unless they are afforded speedy price relief.

In seeking the discontinuance of price control, J. Howard Pew, president of the Sun Oil Company, as a part of the presentation of the American Petroleum Institute before the House banking and currency committee recently said:

"When price control holds the price of a commodity below its free market level, two things inevitably happen—demand is encouraged and supply discouraged. Thus the shortage of that commodity grows, rationing becomes necessary, and the consumer pays the bill. Next in order will be material priorities and all other war-time controls under which industry would be told not only at what price it can sell its goods, but what type of goods it can make. What is more, consumers will be told what they can have, irrespective of what they want. A system of wage stabilization would have to be adopted and, ultimately, workers would be told where they must work. The result would be, as Henry Hazlitt, the New York Times writer, has so well said: 'A completely petrified totalitarian economy, with every business firm and every worker at the mercy of the government and with a final abandonment of all the traditional liberties that we have known.'"

* * *

A 1,000-hp. Alco road switcher is at the rear helping this heavy New York Central passenger train up the West Albany grade outside Albany, N. Y.

The railroads are constantly improving their yards and terminals in the interest of better service and greater economy. This is a scene on the Missouri Pacific at Dupo, Ill.

Must Keep Plant in Step with Progress

Railroads strenuously endeavoring to compensate for lost time in modernizing and improving their fixed properties—Examples cited to show what is being done

WHAT are the implications of the term "freight progress" as applied to the fixed properties of the railroads? The answer is that the term embraces all the things that must be done to keep such properties in step at all times with technological progress and with the prevailing requirements for freight service as they are determined by the needs and desires of shippers, developments in rolling stock and the ever-present demand in peace-time for maximum economy. Since the fixed properties comprise the arteries of railroad transportation, it may be said that the problem is to keep them up to date in every respect as a preventive for "hardening of the arteries", which, insofar as the railroads are concerned, may be described as a disease characterized by progressive obsolescence and deterioration, with loss of efficiency the most pronounced symptom.

During the war, with other systems of transportation proving hopelessly inadequate to handle any but a small fraction of the country's greatly enlarged transport requirements, the railroads shouldered the lion's share of the load and thereby proved their indispensability in war time. Now, with peace-time conditions again prevailing, they are faced with the necessity, in view of increasing competition on all sides, of proving their superiority in rendering fast, efficient and economical transportation service. In this struggle the fixed properties will play an important role for the reason that the state of these properties has a considerable bearing, directly or indirectly, on the speed, efficiency and economy of railroad service. The effect is direct to the extent that train speeds, time lost in terminals, the cost of train operation,

On a recently relocated line of the St. Louis-San Francisco in Missouri where helper service was eliminated and other economies effected

the handling of merchandise through freighthouses, and the character and cost of freight service generally are determined by the facilities themselves. Indirectly, the character of the freight service rendered is affected by the fixed properties to the extent that the cost of maintaining such properties has a bearing on the ability of the railroads to render low-cost service.

With reference to those aspects of the fixed properties that have a direct bearing on freight service, engineering departments are mindful at all times of the need for improvements wherever the cost of doing the work can be justified by the benefits to be obtained. They recognize, for instance, the necessity of eliminating excessive grades and curvature to permit increased speeds, to eliminate helper service, and to reduce operating costs generally; of being alert to detect opportunities for making improvements in yards and terminals that will help speed the movement of cars through them and reduce the cost of such movements; of reinforcing, rebuilding or replacing bridges that are the cause of traffic delays because of inadequate load ratings; of making such changes in engine terminals and engine-servicing facilities, including those at intermediate points, as may be indicated by changes in operating conditions, by progress in the design of such facilities or by the needs of new types of power; and of providing freighthouses and other freight-handling facilities that will permit merchandise to be loaded, unloaded or transferred from car to car in the minimum of time and with the least expenditure of effort and expense.

Toward Lower Costs

Engineering and maintenance officers are equally alert to the need for undertaking all those other measures that have as their primary purpose the reduction of maintenance costs, recognizing that the savings effected thereby are reflected ultimately in the rates the railroads must charge for their service. The present-day problem in this respect was stated in a succinct manner by J. P. Kiley, assistant general manager, Chicago, Milwaukee, St. Paul & Pacific, in a recent address before a group of maintenance officers. Pointing out that in the period from 1935 to 1940 maintenance of way expenditures accounted for 15 to 16 per cent of the total operating expenses of the railroads, he said that, because of factors beyond the control of the railroad, such expenses increased to 20 per cent of total operating costs during the war. In view of present-day conditions, he said, we will have "to go back to the 15 per cent basis of total expenses in effect prior to the war and will have to maintain the roadbed so that we can safely handle the passenger and freight business that we all know is going to move at higher speeds than were in effect before the war, if we are going to continue to get our fair share of the business available."

Such officers are, furthermore, fully aware that all track, regardless of how durable the construction or stable the roadbed, requires a certain amount of attention and that a great deal can be done to minimize the cost of doing this essential work. They are, therefore, constantly seeking more efficient methods of conducting maintenance operations, recognizing from experience that the most prolific sources of savings in this respect are greater and more intensive mechanization, ever closer and more effective supervision, careful scrutiny of the work organizations in use with the idea of effecting improvements wherever possible, and the conduct of maintenance work of all types in accordance with carefully prepared programs to be certain that both men and machines are used with full effectiveness.

Because of the shortages of materials and men that prevailed during the war years the railroads were severely restricted in making improvements in their properties in the interest of faster and more efficient transportation service, while at the same time they were unable to compensate fully for the wear and tear on their tracks and structures imposed by the extraordinarily large traffic load carried. In a sense, this was merely a continuation, in a somewhat different form, of a situation that had prevailed for some years prior to the war when difficulties in making improvements and in maintaining the properties to desired standards were caused primarily by a lack of funds rather than by shortages of man-power and materials. Nevertheless, while the accomplishments have been far short of what was desired, they have been sufficient to permit practically all the railroads to return their freight trains to the schedules that prevailed before the war, and in many cases to place them on

Many new facilities to serve the needs of Diesel-electric locomotives are being built by the railroads. This is an interior view of the Great Northern's new Diesel shop at Havre, Mont.

shorter schedules than ever before.

However, to meet competition, freight service must be improved still further and additional cost savings must be achieved. If these objectives are to be realized, it is recognized that additional substantial improvements must be made in the fixed properties and in methods of maintaining them. During the war the amount of construction work done by the railroads showed a material increase over the immediate pre-war period, but the character of the projects carried out was held by government regulation to a certain pattern which excluded many undertakings that were considered essential by the railroads to promote efficiency and economy.

Progress Against Obstacles

With the end of the war it was confidently expected that the lifting of government regulations would clear the way for the railroads to proceed with enlarged construction programs embodying many of the projects that had to be postponed during the war years, and still others that were expected to be required by new demands for improved service and greater economy. It is now apparent that, in a manner of speaking, the railroads will have to resume their position in the back seat for the time being as regards certain types of improvement work. The tune they are hearing is an old one with slight variations, but the substance of it is that certain materials are going to be hard to get for the time being and that, as a consequence, the railroads will have to do all they can with what is available.

While not minimizing the difficulties to be encountered, and the need for the railroads to exert themselves strenuously in demanding fair treatment at the hands of those controlling scarce materials, it can be said with confidence that, in view of the skill and ingenuity that have been developed in dealing with similar situations in the past, the railroads will find it possible to make considerable progress in improving their properties even under the conditions prevailing today.

Widespread strikes, government pricing policies, excessive demands from all types of consumers and reconversion problems generally have all combined to restrict the quantities of materials that the railroads need to make the improvements in their fixed properties that are now so long overdue. The latest blow, of course, is contained in the building restrictions set up recently by the Civilian Production Administration, which are designed primarily to channel available building materials into the construction of homes for war veterans. These regulations forbid the beginning of construction and repair work on buildings and certain other structures without specific authorization, with the exception of specified types of small jobs. Although railroad building projects costing $15,000 or less are exempt from the regulations, this fact contains very little comfort for the roads because any project costing no more than $15,000, especially in view of present-day costs of materials and labor, is too small to be of any great consequence.

The curtailment of railroad improvement work involving buildings, as long as the present regulations are in effect, constitutes the darker side of the picture. But the situation is not altogether a gloomy one, for there are many types of improvement projects looking to the betterment of freight service that are entirely exempt from the regulations, since they do not involve building work. Thus, insofar as these regulations are concerned, the railroads are entirely free to proceed with improvements involving the construction of new trackage of all types; the strengthening or stabilizing of tracks and roadbeds; the construction, enlargement or elimination of tunnels; line changes to reduce grades, eliminate curves and shorten distances; bridge improvement or construction work; and all other types of projects not involving building work.

Much Work in Prospect

Even with the types of improvements listed in the foregoing paragraphs the railroads are restricted somewhat by the stumbling blocks imposed by continuing shortages of certain materials and in some cases, of man-power. Nevertheless, despite the difficulties encountered, there is still a great deal of improvement work being accomplished today and in prospect. The truth of this statement is apparent to anyone in a position to have a broad picture of the volume of such work that has recently been completed, is now under way or is about to be undertaken. This even includes an impressive amount of work involving buildings, such as freighthouses, that was

A portion of the interior of the modernized freight terminal of the Missouri-Kansas-Texas at St. Louis, Mo. Taken at street level, this view shows part of the tailboard space and one of the ramps between the two main floors

completed or undertaken before March 26 of this year, this being the deadline established by the new restrictions on building work.

Line Changes

There is no better way to demonstrate what the railroads are doing in the way of property improvements in the interest of better freight transportation than to cite examples of some of the more important types of projects that have been recently completed, are now in progress or are contemplated for the near future. Line changes, for instance, comprise a category of projects that is receiving particular attention. Notable among the undertakings of this type that are now under way is that of the Chicago, Rock Island & Pacific to reduce curves and grades on the "Golden State" route extending from Chicago through Kansas City to California in connection with the Southern Pacific. Involving five separate line-change projects, four in Iowa and one in Missouri, this undertaking, already in an advanced stage, contemplates the construction of a total of about 80 miles of new track and roadbed at a cost of approximately $12 million. In this work grades are being reduced from as much as 1.6 per cent to ruling grades of 0.5 per cent, and curves are being reduced from as much as 7 deg. to less than 1.5 deg.; and substantial savings in distance are also being accomplished.

By means of these five projects, the railroad expects to realize important benefits in the form of savings in motive power, of reduced running time for both freight and passenger trains, and of substantially lower operating costs. The saving in freight transportation can be demonstrated by reference to a single location involving the reduction of grades from a maximum of 1.6 per cent to 0.5 per cent. Where the railroad formerly had to use two locomotives to haul 3,000-ton freight trains over this territory, one locomotive now handles 4,500 and 5,000 tons at considerably higher speeds. Thus, in addition to making possible better and faster service to shippers, the reduction of grades at this one location will bring the railroad an annual saving of 90,012 train-miles, the implications of which, in the form of reduced expenses, are immediately apparent.

Following a period of relative inactivity during the war years, such line changes have again entered the picture on a considerable scale, indicating that the railroads recognize the importance of this means of achieving improvements in service and lower operating costs. In fact, in a recent survey, 10 out of 34 railroads answering a questionnaire stated that their improvement programs for 1946 included line-change projects to remove speed restrictions or to increase train tonnages. The line-change projects contemplated by these railroads vary in magnitude from 1 to 20 miles in length and from $75,000 to $2,500,000 in cost, with as many as seven such projects being planned by a single road.

The modernization of freighthouses and other freight-handling facilities at terminals comprises another category of projects that is being emphasized at the present time. This is true for a combination of reasons including the fact that such improvements were among those that had to be severely curtailed during the war, and the further fact that the railroads are particularly anxious to do what is necessary to expedite the handling of freight through terminals and to reduce the cost of such handling.

Terminals Modernized

Although the new restrictions on building work are certain to affect adversely the railroads' plans for modernizing their freighthouses and related facilities, a considerable amount of such work was undertaken before these restrictions went into effect, and some jobs have been completed. Among these is the modernization of the Broad Street freight terminal of the Missouri-Kansas-Texas at St. Louis, Mo., which was formally opened on March 9. As modernized, this building, a two and three-story structure, 400 ft. by 230 ft. in plan, provides space for offices, truck docks and loading tracks. Two floors are devoted to the handling of freight; they are connected by two ramps, each with two-way traffic lanes.

Most of the merchandise handled through the freighthouse will be distributed with the aid of 375 four-wheel trailers pulled by gasoline tractors, using the connecting ramps between the main

floors, but in addition a special dock has been equipped with a gantry crane to facilitate the handling of bulky or heavy shipments and a 10-ton elevator, with an 8-ft. by 18-ft. floor area.

Better Icing Facilities

In the railroads' efforts to render better service to shippers of freight, the matter of speeding up movements of perishables and of adopting improved methods for protecting them en route is not being overlooked. The fixed facilities involved here are the many stations that are maintained by the railroads, particularly the western lines, to keep refrigerator cars supplied with ice. Various railroads are now investigating the possibility of shortening the time required to re-ice refrigerator cars by improving the facilities provided for this purpose. Another factor behind the revival of interest in these plants is the recent trend toward the increased use of body icing (the spreading of "snow ice" directly over the commodity to be protected) for preserving certain types of vegetables. Since the snow ice must be injected into refrigerator cars through the side doors, the increasing use of this method means that existing icing stations must be revamped as necessary to make this possible with a minimum of effort and delay.

At least one large project in this category has been completed during the past year, this being the new icing plant constructed on the Missouri Pacific at Dupo, Ill. In this facility the bunkers of refrigerator cars are iced from a high-level platform of sufficient length to accommodate 50 cars on each side, while the requirements for body icing are served by a low-level platform that is of sufficient length to permit 16 cars to be iced at one time, 8 on each side of the platform. To achieve efficient and economical operation this plant is highly mechanized, including a series of motor-driven conveyor chains for handling blocks of ice, a motor-driven ice breaker, a series of crushet-slingers on the low-level platform for use in body icing, and a power-driven elevator by means of which bulk salt is raised to the upper level. The cost of the project was about $260,000, but it is felt that the benefits to be derived (faster icing of refrigerator cars, and lower cost of operation and maintenance) will be more than sufficient to justify the expense.

Diesel Shops

The basis for a considerable amount of the progress in freight transportation that has occurred in recent years has been the increasing use of Diesel-electric locomotives in road service. Because the requirements of such power in the way of repairs, fuel, water and servicing generally are so markedly different from those of steam locomotives, many railroads have found it necessary to provide entirely new facilities for serving the needs of the Diesel locomotives. These facilities usually include separate shops for running maintenance and heavy repairs, and the necessary equipment for fueling, sanding and washing the locomotives. Provision must also be made for supplying the locomotives with cooling water and lubricating oil, and rendering other services. Not the least important phase of this problem is that of providing water supplies of the proper quality for use in the cooling and heating systems on the Diesels, both at terminals and at intermediate points.

In designing Diesel-handling facilities railway engineers have demonstrated their ability to visualize the peculiar needs of this type of power and to base their designs entirely on such needs without any tendency whatever to be influenced by past thinking and practice in terms of the requirements of steam power. As a consequence, practically all of the Diesel-handling facilities that have been built are models of modern construction and efficient arrangement, capable of administering to the needs of the Diesels with a minimum of effort, time and expense. Hence, with so many outstanding installations to choose from it would be difficult to single out one to serve as an example, but it might be mentioned that among the railroads on which modern Diesel-handling facilities have been completed recently or are now under construction are the Atchison, Topeka & Santa Fe, the Erie, the Chicago, Burlington & Quincy, the Great Northern and the Southern.

A Yard Improvement Project

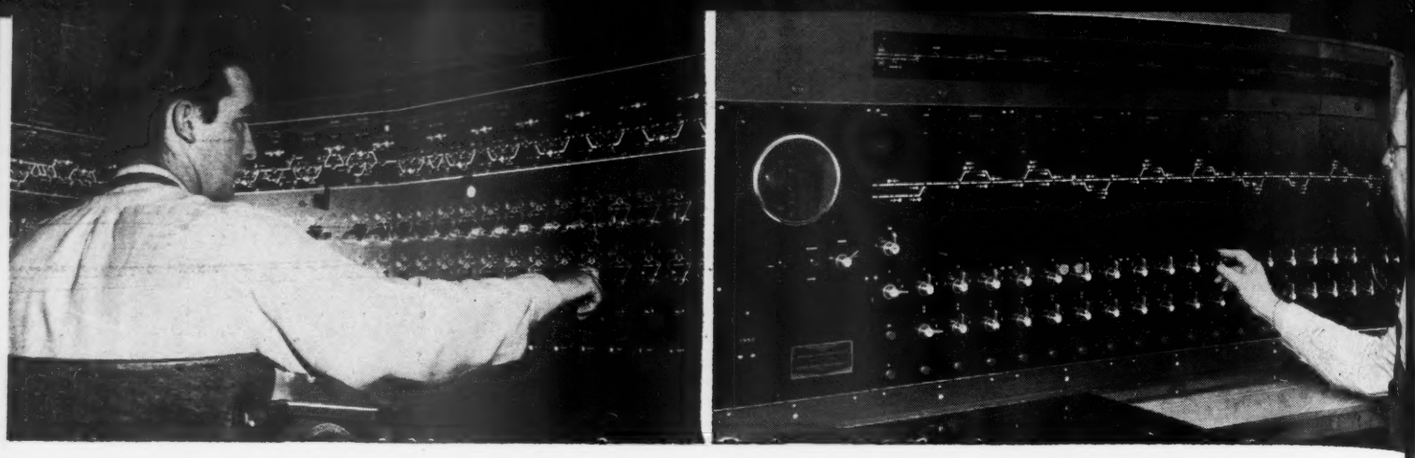
The improvement and modernization of freight yards comprises another class of projects by means of which better freight service is achieved. An example of such a project is one on the Baltimore & Ohio at Chicago, plans for which were announced only recently. This undertaking will involve the rearrangement and enlargement of three small local yards, known collectively as Barr yard. By rearranging the existing yards and constructing new trackage, with a total of 50 miles of track being involved, the standing capacity will be increased from approximately 1,600 to 3,464 cars, at an estimated cost of $2,500,000. The purpose of the project will be not only to enhance the capacity of the yard, but also to increase its efficiency, and thereby to expedite the company's switching and classification work in the Chicago district.

On completion of the work the yard will consist of a four-track westbound receiving yard holding 399 cars and accommodating trains of 125 cars; a westbound classification yard of 26 tracks holding 1,211 cars; an eastbound receiving yard of four tracks having a capacity of 246 cars; and an eastbound classification yard of 13 tracks holding 1,057 cars. Also, there will be two yards for making light and heavy repairs to freight cars, one with a standing capacity of 375 cars and the other with a capacity of 176 cars. Eventually, a complete engine terminal with a 115-ft. turntable is also to be constructed.

The foregoing examples illustrate only a few of the things that the railroads are doing to improve and maintain their fixed properties so as to render better service to shippers and to reduce operating costs. They are convincing evidence that, notwithstanding the obstacles currently being encountered, the railroads are proceeding aggressively with plans to do whatever is necessary to these properties in the interest of better, faster and more economical freight transportation. In other words, to the extent that the roads are able to carry out their plans, there is no danger of "hardening of the arteries" here.

* * *

The "Black Diamond," decorated in commemoration of the Lehigh Valley's centennial, passing Treichlers tower (Pennsylvania)



Left—This centralized traffic control machine at Las Vegas, Nev., controls 175 miles on the Union Pacific. Right—This centralized traffic control machine at Halifax, N. S., on the Canadian National, is one of two machines on a 185-mile territory

Modern Signaling and Communication to Speed the Shippers' Freight

These facilities shorten overall time on the road, and improve on-time performance, by reducing the number of unnecessary train stops and the duration of delays

IN THIS post-war period, modern railway signaling and train communication systems are going to serve an increasingly important part in programs to reduce overall train schedules between terminals, as well as to insure on-time arrivals of freight shipments. These statements, based on past performance, are true simply because the easiest and most effective way of saving train time is to reduce the number of train stops and the duration of standing time, either when trains are on the road or when cars are waiting in yards.

Shippers are interested in the safety of train operation as a means for preventing train accidents which might cause damage to lading in transit. Such accidents are effectively prevented by automatic block signaling, and an additional advantage of this form of protection is that following trains can be operated at closer intervals, thus increasing the capacity of the track to keep more trains moving rather than waiting somewhere. All of these benefits are well recognized, and accordingly the railroads have been installing automatic signaling on their more important lines for many years, so that about 99,736 track miles are now so equipped in the United States.

With automatic block signaling, the train movements are authorized by the timetable and train orders. If a train gets behind schedule, train orders are issued to authorize trains to move at variance from the timetable. Of necessity, trains lose a lot of time needlessly, when waiting on sidings, because the dispatcher has no accurate means of knowing the progress being made by each train, and there are not enough open offices at the proper locations to permit orders to be changed to take advantage of changes in operations of trains.

Shippers Ask More Than Safety

The great majority of shippers have in the past accepted safety for their shipments as a foregone conclusion, but looking forward in the post-war period they may want to know what the railroads are doing or can do to provide improved modern signaling to transport products to the consignee on shorter schedules than before the war—as, for example, fourth morning delivery instead of fifth morning—and insure on-time arrivals.

As an aid in these respects the railroads are making extensive installations of a more modern signaling system known as centralized traffic control which includes power switch machines at sidings and signals at all these switches to authorize trains by signal indication: (1) to continue on the main track to the next town; (2) to enter the siding; or (3) to leave siding and go to the next town. Thus this C. T. C. eliminates the use of timetables and train orders.

The power switches and signals on extended mileages up to 160 miles or more are controlled by one man seated at a machine in a central office. This C. T. C. machine has lamps on a track diagram which indicate the locations of and progress being made by trains. Based on this minute-to-minute information, the man in charge can control the power switches and signals so that trains can make meets on very close time. Where sidings are considerably longer than the trains, many of the meets are made without either train being required to stop.

Experience, based on more than 6,000 track miles of this C. T. C., indicates that such a system on a busy single-track division will save one minute or more for every through freight train for every mile of the territory. And in addition to saving time on the road, C. T. C. increases flexibility so that trains can be started out of yards just as soon as they are ready to go, rather than waiting for train orders to be issued effective as of a particular time.

Centralized traffic control was developed prior to 1927, and the shipper may want to know why the railroads have not installed it on all their important lines before now. In defense of the railroads on this score, it may well be said that during the depression years, 1930 to 1940, funds were available to install C. T. C. only on the sections where large savings could be made. Then during the war period, 1940 to 1945, inclusive, installations of this system were re-

stricted to those sections of railroad that were congested due to handling large volumes of war materials. Now for the first time, the railroads can consider the installation of C. T. C. on the basis of rendering improved service to shippers of peace-time products.

Whereas circumstances limited the installation of centralized traffic control to a total of 6,108 miles from the time it was developed in 1927 up to the end of 1945, the post-war years should see this system extended rapidly. There are more than 4,000 miles of railroad on which no signaling is now in service, and on which centralized traffic control should be installed as an original project, rather than installing automatic block signals and subsequently adding C. T. C. On something more than 10,000 miles, the original automatic block signaling has now been in service from 25 to 40 years or more. The equipment is worn and the signals are not properly located to correspond with the speeds at which trains are now operated. Therefore, the signaling as a whole is ready for replacement. Rather than restoring the system as automatic block, the railroads should change over to centralized traffic control, and thereby be able to offer the shippers better freight service on those territories.

Long C. T. C. Installations

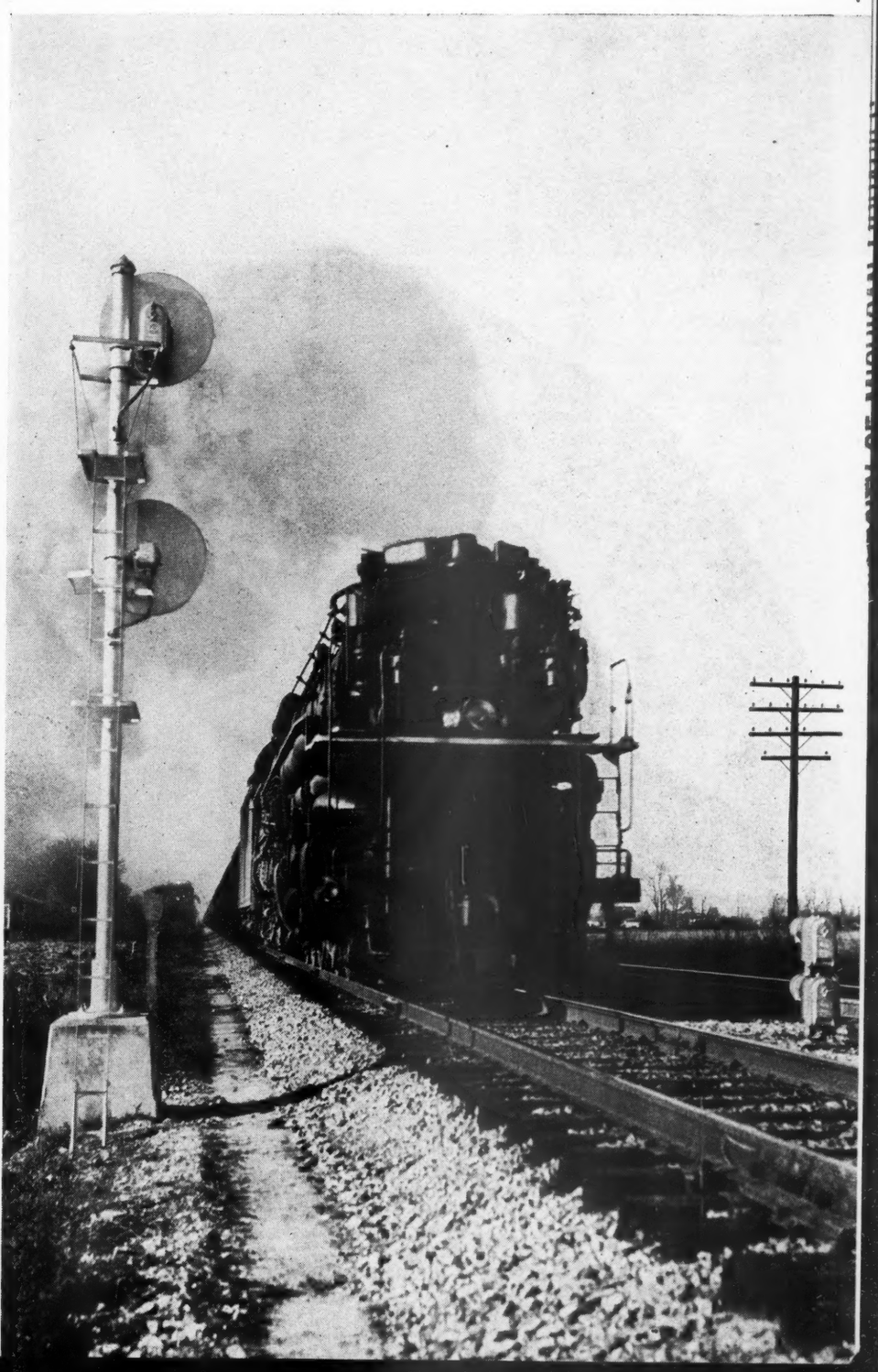
Several extensive programs of this nature are now well toward completion. For example, the Burlington installed C. T. C. on 112 miles between Akron, Colo., and Denver in 1937; on 98 miles between Lincoln, Neb., and Hastings in 1945; and other projects are now under way or completed so that the entire 483 miles between Lincoln and Denver soon will all be C. T. C. On the Denver & Rio Grande Western, C. T. C. is in service on one continuous stretch of 286 miles between Dotsero, Colo., and Helper, Utah, as well as on 128 miles between Denver, Colo., and Bond, on the D. & S. L. Thus with the exception of 38 miles between Dotsero and Bond, there is either C. T. C. on single track, or operation by signal indication right-hand running on double track, on 570 miles between Denver and Salt Lake City. Numerous other roads, such as the Milwaukee, the Missouri Pacific, the Boston & Maine, the Canadian National, the Seaboard, the Southern Pacific, the Santa Fe, the Western Pacific and the Union Pacific, have installed long sections of C. T. C. And in almost every instance the shippers' freight gets there about 1 hour sooner for every 60 miles of C. T. C. in the route traversed.

Centralized traffic control is used also on multiple track lines. For example, on certain sections of double track both tracks are signaled for train operation in both directions, so that an idle section of track can be used to run a train around a slower one of the same direction on the other track. With this practice both trains are kept moving at maximum permissible speeds rather than one train wasting time waiting on a siding.

On sections of three-track, the middle track is signaled for both directions, so that two tracks can be used in the same direction for certain hours, and two tracks can be used the opposite direction during other hours. Also on some short sections of four-track, two tracks are signaled for both directions so that a total of three tracks can be used one direction or the other.

Modern Interlockings Too

During the war the railroads postponed the replacement of interlocking facilities in order to save materials for military purposes. Also in those years



Modern interlockings and train operation in both directions on both tracks save train time on a section of the Virginian

Above—The Kansas City Southern has train communication in service on 650 miles. Below right—A freight train conductor on the Pennsylvania using train communication equipment to converse with the engineman

numerous developments were made in the systems for controlling interlockings as well as in the signals, switch machines and other apparatus. As a result the railroads are now prepared to replace a great many old style interlockings, and, in many instances, combine the control of two or more old plants into one machine. An important benefit is that control from one point is a means for expediting train movements, because one man can make decisions and take action promptly, whereas with several plants confusion and delays resulted from telephone conversations between towers. The post-war programs to replace and consolidate old interlockings should be of benefit in expediting freight trains to a considerable extent.

Reduced Delays in Yards

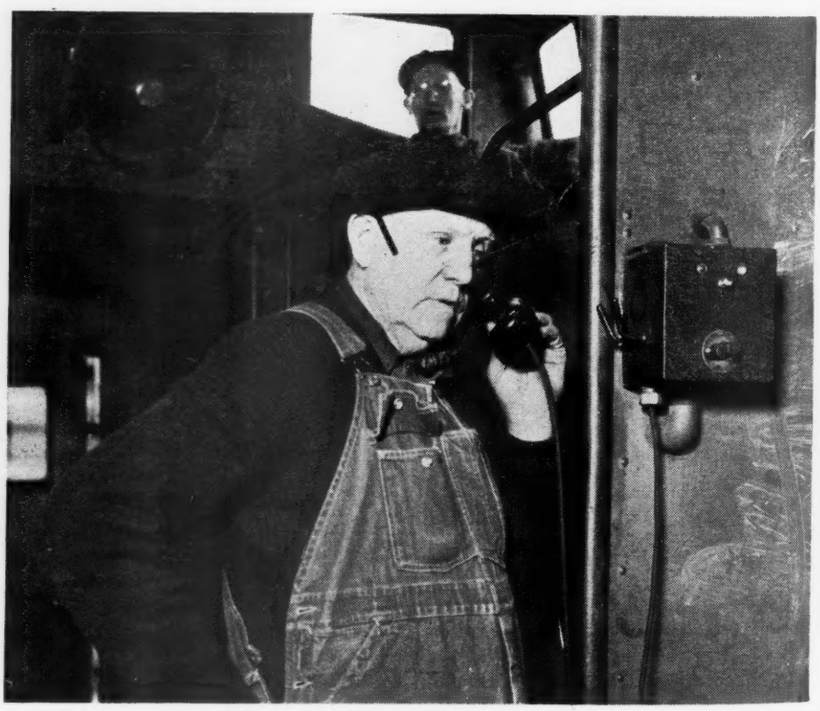
Shippers may be interested to know what the railroads have done and can do to reduce time lost when cars are standing in yards. In years gone by a large percentage of these delays were in gravity type yards at terminals or important junctions where cars are classified in groups according to their destinations. The conventional method of operating these yards was to have several men to throw the switches leading to the different tracks, and to have a man ride each car or cut of cars to apply the brakes to control the speed down the hump, through the switches and onto the classification track. Some 20 years ago devices known as car-retarders were developed to control the speed of the cars, and power machines were installed to operate the switches.

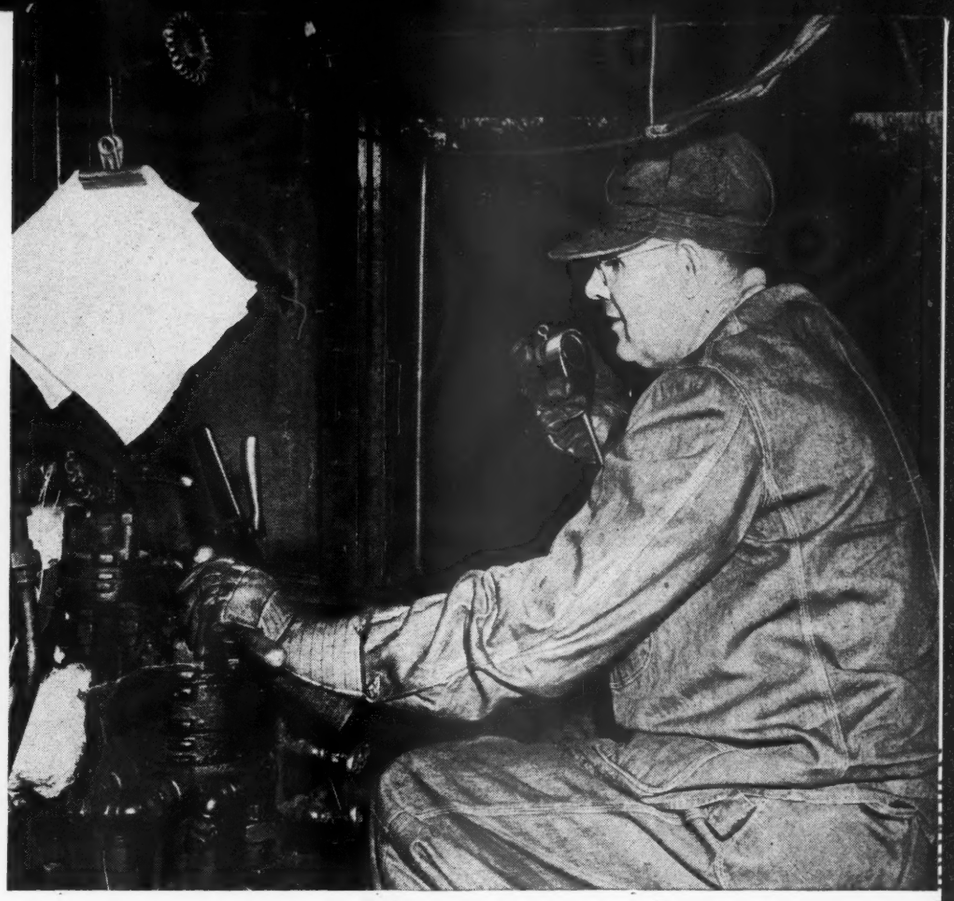
These car-retarders and power switches have been installed in 43 of the larger freight classification yards in the United States, and the result has been to reduce the time for cars to pass through these yards. Furthermore, the maximum operating capacity is available at all times with a minimum operating expense. For these reasons cars can be classified when received, rather than waiting for some time in the receiving yard. Also, trains are made up and depart from the yard tracks, without being moved to departure yards, as was previously the practice. The time saved in these yards is part of the 24 hours that is being clipped from many of the long-haul schedules. The reconstruction of more yards, including the installation of car-retarders, is one of the important items on the programs of several roads to improve freight service to the shippers.

Yard Communication

The term yard communication applies to a space radio or inductive carrier system for two-way conversation between the hump-master and the engineman of the locomotive used for pushing cars over the hump in a gravity classification yard. Similarly the system can also be used for the same purpose when the locomotive is assigned to work in various other parts of the yard.

These yard communication systems have been installed in several large classification yards and the benefit is that the operation of the yard is expedited, espe-





Engineman on the Seaboard using train communication to talk to the conductor

cially during stormy weather. During the past year some roads have installed equipment for two-way conversation between a central office and the locomotives used for switching for industries in a large area ranging up to 14 miles or more from the office. If a shipper calls the terminal superintendent requesting a car for loading, or stating that he has a loaded car ready to be pulled, the superintendent can use the communication system to issue instructions accordingly to the switching crew that is in that vicinity. Thus the shipper gets service right away, whereas without the direct communication there might be a delay of several hours, or perhaps a whole day, before the cars would be handled. In the Chicago industrial area the Burlington has one central office and seven switching locomotives equipped with this communication system. Eighteen more locomotives used on this area are to be equipped as soon as apparatus is available.

Equipping Freight Trains

Train communication is a term applied to a system which provides two-way conversation by space radio or inductive carrier between the locomotive and caboose of a freight train, as well as between either of these vehicles and other trains or wayside offices. The inductive and radio systems of train communication were tested and developed for more than 20 years, but for technical reasons beyond the scope of this discussion, acceptable systems of a practicable nature for extensive installations became available only within recent years. Wartime restrictions postponed proposed installations so that train communication is definitely a post-war proposition. Several railroads, such as the Kansas City Southern, the Denver & Rio Grande Western, the Pennsylvania, the Bessemer & Lake Erie, the Missouri Pacific and the Atlantic Coast Line have extensive installations now in service or under construction. Numerous other roads have made extensive tests, and a definite conclusion is that train communication gives promise of saving considerable time for freight trains while on the road.

When making up a train in a yard, the brake line air pressure must be pumped up by the locomotive until a certain pressure is registered in the caboose. By using telephone train communication the conductor can tell the engineman when this pressure is registered, so that the train can depart promptly. Otherwise several minutes might be lost in signaling the engineman.

When the rear of the train passes out of the yard onto the main track, the conductor can use the train communication to advise the engineman so that the speed can be accelerated at once. Otherwise he will have to drag along at slow speed for a considerable distance to be sure that the rear end is out on the main track. This same circumstance applies each time a train departs from a siding, or uses a crossover between main tracks.

If a hot box or dragging brake beam is noticed by the men in the caboose, the only means they have for stopping the train is to apply the air at the rear, which may cause the train to be pulled in two. With train communication, the conductor can tell the engineman, and he can stop the train safely and without damage to the equipment or lading.

Records of numerous trips show that train communication is being used effectively to reduce the time that otherwise would be lost in delays. A conclusion is that the railroads will install train communication extensively during the next few years, and from the standpoint of the shippers, this communication equipment will improve on-time deliveries of freight.

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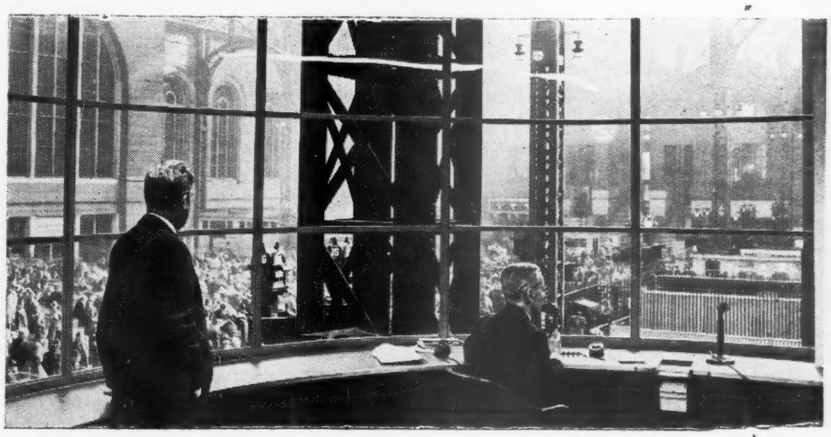
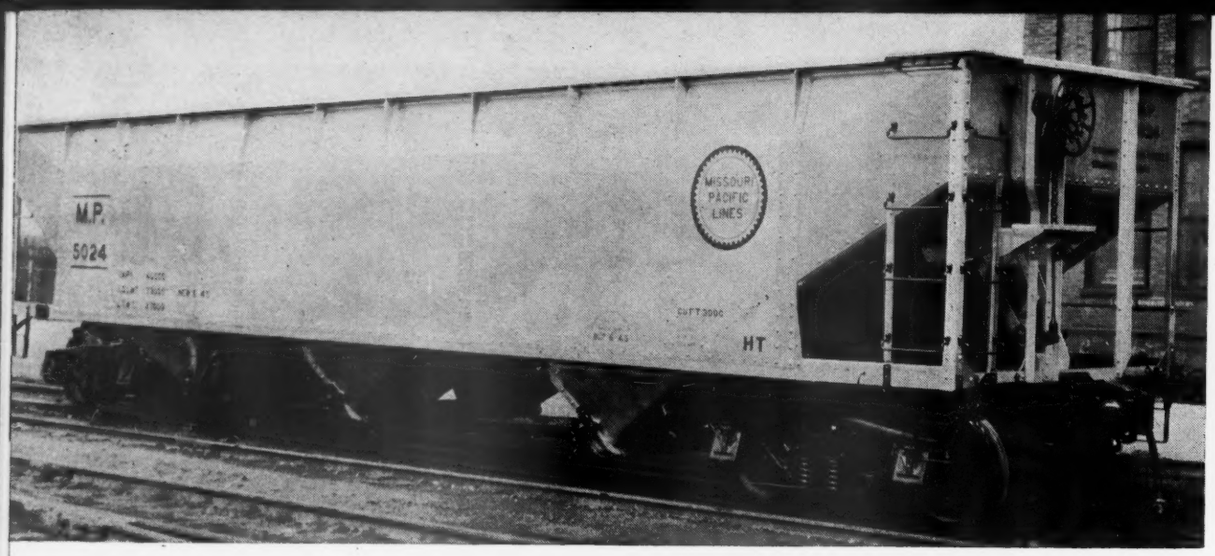


Pennsylvania Railroad Photo

A section of the new stationmaster's office at Pennsylvania Station, New York. The control room is completely equipped with teletypewriters, telautographs and telephones. Outbound trains and their track numbers are broadcast over the public address system from here



A 70-ton aluminum-alloy hopper car with a capacity of 3,000 cu. ft. Weight, 37,000 lb.

The Freight Car and Freight Progress

One-purpose cars, though not numerous, grow in importance—Standardization of general-purpose cars increases

THE freight car has two functions to perform: it must serve as a container for the goods to be moved, protecting them from the effects of weather, and from theft; it must be suitable for movement in trains at least of 150 cars. Neither of these functions seems very complex and, indeed, when compared with any type of locomotive on the rails today, neither the structure nor the mechanical equipment of the car can be called complex. Nevertheless, many of the problems which have had to be solved over the years to provide improved protection and more economical lot sizes, particularly for bulk commodities, as well as those pertaining to the safe and economical movement of more cars in faster trains, have been complex in the extreme.

Only a few examples need to be recalled. With respect to the first function, there is the long struggle which the railways went through before car roofs were developed which would keep out the weather for a reasonable life; there is the improvement in the insulation of refrigerator cars; there are improvements in refrigeration—a field still open for further developments; there are the evolution and adaptation of materials which have made the tank car such an important factor in the expansion of the chemical industry. Two outstanding mechanical developments affecting the safety and economy of train movement are the adoption of a set of requisites for the performance of friction draft gears and the improvement of designs to meet them, and the creation of the AB brake, which has already effected a great improvement in train handling, although nearly half of the rolling stock is yet to be equipped. The evolution of the present highly reliable truck side frame and bolster castings is another example which has materially affected freight-car reliability.

Special Purpose Cars

Progress of the freight car as a container has been marked by the extension in the use of specialized types of cars in the handling of a growing number of commodities. These are refrigerator cars, tank cars, and covered hopper cars. The refrigerator car, although structurally it has not been subjected to any revolutionary changes, has been made more effective by the use of more insulation, better applied to avoid direct paths for the leakage of heat through the walls, floors and roofs, and by the use of insulated bunker bulkheads. Further improvement has been effected in the uniformity of temperatures within the car by the resort to forced circulation in the direction opposite to the flow of air when subjected to the gravity action of the ice in the bunkers alone.

Two years ago the United Fresh Fruit & Vegetable Association organized a refrigerator car committee which proceeded to work out a set of requisites for an all-purpose refrigerator car which would meet the immediate needs of its members. At the same time it recommended that a program of research be undertaken by the railways and private owners of refrigerator cars for the purpose of developing a still better car and determining which of the present available methods of refrigeration is the best. The recommendations of this committee were conservative and received favorable attention. At least two railroads—the Illinois Central and the Chicago, Burlington & Quincy—have built cars, one embodying the committee's requisites and the other to compare methods of refrigeration. The Association of American Railroads also has undertaken to carry out a program of refrigerator-car research which will serve the purpose of the committee's recommendations. It is expected that this program may be under way during 1946 and 1947.

Handling Chemicals Safely

Since the beginning of organized effort to bring the hazards of shipping dangerous liquids in tank cars under control, some 43 years ago, the list of materials moving in these cars has expanded greatly. Some of these materials have been known and used for a long time. But until the development of special types of tank cars made possible their transportation in bulk, their utility was limited to what could be supported by the carboy as the container. Two developments have been of great importance in lifting this cramping restriction from the chemical industry. These are the development of high-pressure tanks and the application of special materials in tank construction. Tanks are built of aluminum and of nickel-clad steel and steel tanks are lined with lead and rubber. Thus is growing a list of chemicals which enter into industrial processes in quantities moved safely and free from contamination.

The covered hopper car, a relatively recent addition to the list of freight cars, has revolutionized the handling of dry products fine enough to flow freely. The demand for these cars is developing faster than the supply.

General-Purpose Cars

While these specialized types of cars are of tremendous importance to the industries affected by them, they are a small part of the freight-car inventory. The great bulk of the goods which the railroads are called on to handle move in the box, the gondola and the hopper, and the railways do not favor the encroachments of single-purpose cars for moving any which can be moved in the general-purpose cars. Furthermore, the effort to effect some degree of standardization of these types has been continuous for more than 30 years. At present there are three A. A. R. standard box cars. These are the 40-ft. 6-in. steel-sheathed box cars of either 40 or 50 tons' capacity which are 9 ft. 2 in. wide and 10 ft. high or 10 ft. 6 in. high inside at the eaves; the standard 50-ft. 6-in., 50-ton steel-sheathed car, 9 ft. 2 in. wide and 10 ft. 6 in. high, with side doors either 6, 7 or 8 ft. wide, and a car of the same dimensions for automobile traffic which has 15-ft. staggered side-door openings. While new cars are by no means confined exclusively to the standard cars, either in dimensions or construction, the structural design of the standard cars serves as the basis of design in most cases. Departures from it are becoming progressively fewer.

The weight of the 50-ton, 40-ft. 6-in. cars generally varies within a range of 45,600 to 46,000 lb. The 50-ton, 50-ft. 6-in. cars vary from 50,000 to 55,000 lb.

Dimensions of gondola cars vary more widely than those either of box or hopper cars. This statement applies to length, width, and inside height of sides.

In 1941 the Mechanical Division of the Association of American Railroads proposed four gondola-car designs as recommended practice. These are a 50-ton car, 41 ft. 6 in. long, with fixed ends and solid bottom, with an inside width of 9 ft. 6 in. and 4-ft. 8-in. sides; a 70-ton, 52-ft. 6-in. drop-end solid-bottom car, 9 ft. 6 in. wide inside with sides 3 ft. 6 in. high; a 70-ton, 65-ft. 6-in. mill car, 7 ft. 9 in. wide inside, with 3-ft. 6-in. sides, and a 50-ton car with fixed ends and drop bottom, 41 ft. long, 9 ft. 6 in. wide inside, and 5 ft. high.

During the war these steel designs were replaced with recommended-practice composite designs of similar dimensions. The new cars now on order and being built indicate a strong trend toward the general use of the recommended-practice designs, at least so far as the dimensions are concerned.

The A. A. R. has two standard hopper-car designs. These are a 50-ton two-hopper car with a capacity level full of 2,145 cu. ft., and a 70-ton three-hopper car with a capacity level full of 2,773 cu. ft. These designs have been in effect long enough to have materially reduced the variety of hopper-car designs. When these designs were first adopted, the trend was definitely toward the use of cars of the larger capacity. For some time before the war this trend had reversed and the major emphasis on the 50-ton cars will probably continue.

There is a false indication of adequacy of the car supply at the present time which reflects the reductions in production which have followed the epidemic of strikes that began last fall and which have culminated in the growing paralysis of all business caused by the coal strike. The question of the adequacy of car supply will have to be discussed on the assumption that this situation will clear up before the recuperative powers of industry have been too seriously damaged to permit rapidly stepping up production to meet the dammed-up demand for nearly every article of commerce.

Are There Cars Enough?

During the war the heavy demand was for open-top cars. While the box-car supply was too tight to be comfortable, the need for the other types was so much greater that materials available for car construction were allocated to the open-top types and flat cars. During our defense program and early in the war program construction materials were moved in large amounts while cantonments and industrial-plant expansion were under way. This was followed by the extraordinary demand for the movement of steel products to which ultimately were added large movements of military equipment which made heavy demands on the supply of gondolas and flat cars.

The railroads, therefore, entered the post-war period with a much more nearly adequate supply of open-top cars than of box cars. Since the end of military operations the shift in the character of the commodities moved has increased the

A 50-ton Cor-Ten steel hopper—Capacity 2273 cu. ft.—Weight, 33,500 lb.

High-speed box cars for l.c.l. service on the home line

demand for box cars while decreasing that for open-top cars. This situation has been aggravated by the degrading process to which box cars particularly were subjected throughout the war, which has gone uncorrected because of lack of sufficient labor and material.

It is, therefore, the box-car situation which is critical. The supply has been inadequate continuously throughout the months since V-E and V-J days. Although the slowing up of industry resulting from the coal strike had assumed considerable proportions in April, the shortages of plain box cars were still substantial with no appreciable increase in surpluses. As matters now stand, neither material nor labor is available in sufficient quantity to insure an early restoration of the conditions of the present inventory so that full use can be made of them for the movement of grain and other materials requiring cars in first-class condition.

Orders on hand at the beginning of the year and those so far released during 1946 amount to approximately 20,000 cars. This is substantially less than probable retirements. Indeed, reports for March indicate a reduction of about 5,000 cars owned since last October 1. To maintain the ownership at last fall's level will require additional orders for 15,000 cars to offset the loss due to probable retirements. To this must be added the twenty, thirty, or forty thousand cars which may be needed in addition to last year's ownership to meet the demands for box cars of a restored economy. War-time restrictions affecting demurrage, the cooperation of the shipper in increasing the car load, and the high tonnage of the l. c. l. car loads effected under General Order 1 of O. D. T. can no longer be counted on to keep the efficiency of car use above normal pre-war levels.

Without more box cars the railways are heading into a period of serious embarrassment.

Refrigerator cars are also short of enough to meet current demands and the present high level of fresh fruit and vegetable production is expected to continue. Orders outstanding for new refrigerator cars—about 3,000—are probably fewer than one-third of the number of new cars required for replacements and needed additions to the present supply.

In the case of gondolas and hopper cars, the acuteness of the demand does not compare with that for the other two types mentioned. Here, however, the need to restore the probable inroads of retirements calls for some 20,000 gondolas and 25,000 hoppers. These figures compare with present cars on order or expected to be ordered during 1946 of about 7,000 gondolas and 12,000 hoppers.

When and What?

When will these much-needed cars be built? That is the question everyone is asking and no one answering. That it will be during 1946 is highly improbable. Even though orders were placed tomorrow, it would take at least a year or probably longer to complete them.

When these cars are built, what will they be like? That question is only less uncertain than when they will be built. Will they be lightweight or will the tendency to fall back on the old heavyweight construction be extended? The question with respect to the use of high-strength steel for car construction seems to involve the determination of how much weight to save and how much to retain in the interest of prolonging the life of equipment beyond that normal for cars of carbon-steel construction. One consideration in favor of the weight-saving answer is the increase in first cost entailed by any compromise with weight where a higher priced material is involved. The weights of standard car types are set forth earlier in this article. Light weight, high-strength-steel cars, weighing at least five tons less than these customary weights, have now been in service for nearly ten years.

But the air brakes available at present for use on these extremely light cars add to the handicap of a price differential which seems to cool the enthusiasm for weight saving. When weight can be saved at little or no increase in car cost, the answer would seem to be clear.

An example of higher speeds—and of better lading protection—in freight-train movement is the proposed expedited "Pacemaker" service of the New York Central. The cars, fitted with high-speed freight-car trucks, rubber draft gears and the passenger type AB brake, will operate at a maximum of 65 miles an hour in trains of 75 cars.

The answer to a number of questions of freight-car development may be indicated by the performance of these cars in the "Pacemaker" service.

RAILROAD LEND-LEASE DATA.—"To help Soviet war transportation, America sent to her under Lend-Lease 1,500 locomotives, 10,900 freight cars, 546,000 tons of rails and 116,000 tons of railroad wheels and axles." —STEEL IN THE WAR.

GENERAL NEWS

I.C.C. Upheld on Class Rate Changes

Northern states fail to get order in No. 28300 set aside by court

The special 3-judge federal court at Utica, N. Y., which has had under consideration the petition of nine northern states for an order setting aside the interim class rate adjustments prescribed by the Interstate Commerce Commission in the No. 28300 proceedings last week dismissed the petition and dissolved the temporary injunction which had prevented the railroads from making the adjustments effective.

The commission's order provided that class rates in the South and West (except in the territory west of the Rocky mountains) should be reduced 10 per cent, and that Official Territory class rates should be increased 10 per cent, pending the development of a new "uniform" class rate structure in conformity with its findings in the general class rate investigation. The states seeking relief were supported in the court proceedings by a group of western railroads. In dismissing the western lines' petition the court indicated, however, that a plea to restrain the enforcement of the interim adjustments might be entertained after a fair trial if it could then be shown that they are "confiscatory."

The court indicated that it had reached its decision after considering three principal points: (1) Whether the commission's order was based on adequate findings; (2) whether the findings were supported by substantial evidence; and (3) whether the record was based on adequate hearings. As to the two latter questions, it held there was ample ground for finding that there was "such evidence" and that the commission held "numerous and lengthy" hearings.

Precedent Established — Going at greater length into the first question, the court came to this conclusion:

"Having found the basic facts as pointed out, the commission was under the duty to exercise its judgment and discretion in determining the effect upon the territories. We may not agree with its decision, and we may not agree with the wisdom of the ad interim order, but we have no power to set the order aside," because of any such lack of agreement, and substitute "our own judgment for that of the commission."

It is a "well-established rule," the decision pointed out, that the "expert knowledge of the commission" should be "left undisturbed" by the courts when dealing with such "highly technical" matters as freight rates. "We find that the facts found by the commission are supported by substantial evidence, and adopt them as our findings," the decision read. "Their inclusion herein by reference to the commission's report is to be understood."

The court's dismissal of the petition has been rated a "great victory" by interests in the South which have been endeavoring to obtain class rate "equality" with the North and West. The northern states, in their petition to the court, had asserted that the rate case was the outcome of "political agitation" seeking commercial advantage for one part of the country at the expense of another, but the court held that this was a question for legislative rather than judicial consideration.

White House Conference on Strike Threat

President Truman summoned the chief executives of the five operating brotherhoods and five management representatives, headed by J. J. Pelley, president of the Association of American Railroads, to a White House conference on the railroad strike threat late on the afternoon of May 14, the day this issue went to press. The threatened strike was that called by the Brotherhood of Railroad Trainmen and Brotherhood of Locomotive Engineers for May 18.

The labor representatives were called to the White House at 3:45 p.m. on the 14th, while the appointment of the management representatives was for 4 p.m. On May 9 President Truman had said that the government would take over the railroads to keep them operating in the event of a strike.

O. D. T. Resignations

J. P. Kiernan, western and southern director, Railway Transport Department, Office of Defense Transportation, has resigned effective May 17. O. D. T.'s May 6 announcement in that connection also revealed that the Railway Transport Department's Section of Traffic Channels will be terminated effective May 19, when the section's chief, Paul B. Christian, will also leave O. D. T.

A former employee of the Akron, Canton & Youngstown and Akron, Ohio, attorney, Mr. Kiernan came to O. D. T. in 1943 from the National Mediation Board's staff on which he had served as mediator since 1939. Mr. Christian, who was formerly with the Southern, came to O. D. T. in 1942 from the Railroad Retirement Board. In addition to his service as chief of the Section of Traffic Channels, he has been chief of operating statistics.

Committee Trims the Crosser Security Bill

New pension benefits, but unemployment tax cut offsets their cost to roads

Revising H. R. 1362, the Crosser bill, which originally embodied the whole Railway Labor Executives' Association program for liberalizing the Railroad Retirement and Railroad Unemployment Insurance acts, the House committee on interstate and foreign commerce last week reported favorably to the House a modified version under which reduced unemployment taxes would offset a proposed increase in retirement taxes to leave the railroads paying a total levy on payroll no higher than the present assessment. The committee rejected all proposals to liberalize the Unemployment Insurance Act and, taking note of the reserve of more than $700,000,000 already built up by the three per cent unemployment tax (paid entirely by the carriers), provided sliding-scale arrangements whereby the future levy will range from one-half of one per cent of taxable payroll, while the fund remains above $350,000,000, to three per cent when the reserve falls below $150,000,000.

This would bring the carriers an immediate tax reduction of 2½ per cent of payroll to offset their half of the additional five per cent levy which the bill provides to cover its liberalizing amendments to the Retirement act and to make the retirement system actuarially sound. Meanwhile railroad employees, in bearing their share of the new retirement taxes, would pay an additional 2½ per cent on their taxable income.

A 12 Per Cent Retirement Tax— Under the reported bill, the total retirement tax, now scheduled to reach a maximum of 7½ per cent in 1949, would become 12 per cent on January 1, 1947, the railroad paying six per cent and the employees the same. In addition, the carriers would pay the one-half per cent unemployment tax, bringing the total levy on them to 6½ per cent. As noted above, this would be the same total rate that the carriers now pay, but it would be less than the present set-up calls for in 1949 and thereafter, when the carriers' total is scheduled to become 6:75 per cent—3.75 per cent being their half of the retirement tax and three per cent the unemployment levy.

The bill's original version would have brought in 1951 a maximum retirement tax of 12½ per cent of taxable payroll, and left the unemployment tax at three per cent, a total levy of 15½ per cent of which carriers would have paid 9¼ per cent.

(*Continued on page 1031*)

Miners' Strike Truce Lifts Freight Embargo

Cut in passenger locomotive mileage to remain at 25 per cent

General railroad freight, express and parcel post embargoes which became effective at 12:01 a.m. on May 10 were suspended as of 12:01 a.m. May 13 following last week's announcement of the "armistice" under which striking bituminous coal miners are returning to work for the period from May 13 to May 25. Meanwhile those provisions of the Office of Defense Transportation's General Order ODT 60, which prohibits the railroads from operating a total daily coal burning passenger service locomotive mileage in excess of 75 per cent of the total operated on April 1, remain in effect; but O. D. T. has suspended the provisions which called for a 50 per cent cut effective at 12:01 a.m. May 15.

Announcement of the embargoes' suspensions was made by Director J. Monroe Johnson of O. D. T. on the afternoon of May 11, the day after the coal-strike truce had been proposed by John L. Lewis, president of the United Mine Workers, and accepted by the mine operators. Pointing out that the freight embargo would be lifted in advance of the actual resumption of coal production, Colonel Johnson said that this had been done to enable industrial production to resume as promptly as possible. He also said that he has admonished the railroads to use every effort to continue conservation of coal.

"This," the O. D. T. director added, "is to be accomplished by avoiding all unnecessary movements, and by the most intensive use possible of Diesel and other oil-burning locomotives, where available. We have been assured by the Solid Fuels Administration of a sufficient supply of coal to meet the daily needs of the railroads upon the resumption of production in the country. It is essential, however, that in the next two weeks every effort be made to increase the reserve fuel supply of the railroads to enable them better to meet any emergency which might occur at the end of that period. This I am calling upon the railroads to do and I feel assured that it will be done."

The suspended freight embargo was Car Service Division Embargo No. 237, Amended. As note in the *Railway Age* of May 11, page 967, it was a drastic ban applying with few exceptions to all carload and l.c.l. freight; and the express embargo was of like scope. The parcel post embargo, announced after the May 11 issue went to press, banned shipments of parcels weighing more than 11 pounds or having a combined length and girth exceeding 60 inches. Exceptions permitted shipments of live day-old poultry; seeds, plants and nursery stock; eggs, butter and other perishable food products; and medicines and surgical supplies.

Embargo's Effect Small—Because the freight embargo was in effect only one full-loading day (Friday, the 10th) after having been announced eight days in advance, it probably had little if any effect in the way of reducing last week's car loading total from what it otherwise would have been. The embargo permitted movement to destination of all freight loaded up to 12:01 a.m. the 10th; and shippers are reported to have taken large advantage of the advance notice to load all possible shipments up to that hour.

At the same time the embargo was the most drastic that could be recalled by the Car Service Division staff, which was swamped with thousands of wires and telephone calls from shippers seeking permits, new exceptions and interpretations of the exceptions. It was "just a madhouse" from the effective hour until the suspension was announced.

Meanwhile Secretary of Interior J. A. Krug in his role as solid fuels administrator was taking no chances that the two-weeks truce will mark the end of the strike. On May 11 he announced continuance of emergency regulations covering the distribution of bituminous coal. "The need for rigid regulation of coal distribution," Mr. Krug said, "is as necessary today as it was at the beginning of the strike. The Solid Fuels Administration intends to continue control of coal distribution as long as there is any danger that essential public services and industry may be forced to suspend because they lack coal."

Earlier in the statement, Mr. Krug revealed that of the 1,600,000 tons made available for S. F. A. distribution by its orders at the beginning of the strike, only 650,000 tons remained on May 9. S. F. A.'s May 11 order established three preferential classes of consumers, railroads being in the first class. They are thus "directed promptly to place orders for coal with their regular suppliers," and they are "authorized to order tonnage not to exceed, in the aggregate, estimated consumption requirements from the date of the direction to May 31, plus that amount which may be necessary to bring their stockpiles up to a 20 days' supply."

Before the truce was announced, Civilian Production Administrator John D. Small issued his second report on the "Impact of the Coal Strike on Reconversion." He predicted that the "drastic freight embargo" would "quickly force the wheels of American industry to grind to a rude stop." His specific discussions of the impact on various industries included an expression of concern that the embargo's ban on shipments of tinplate would stop the flow of cans to canning factories with the result that much food would spoil. C. P. A. and the Department of Agriculture, Mr. Snyder went on, had "urgently requested" O. D. T. to provide a blanket exceution to the embargo to permit the movement of tinplate. This request for an exception was not granted, but a general permit was issued to allow shipments of containers to producers of foods and drugs.

Appropriation Bills Signed

President Truman last week signed H. R. 5400, the recently-enacted War Department civil functions appropriation bill for the fiscal year ending June 30, 1947. The bill provides $110,000,000 for rivers and harbors work during the next fiscal year. Previously the President had signed the fiscal 1947 Independent Offices bill which provides funds for the Interstate Commerce Commission and the Public Roads Administration, including $25,000,000 for grade crossing protection and elimination work.

Decision Expected on Rate Increases

I.C.C. concludes hearings on rail petition for immediate relief

With the conclusion of oral argument on May 13, following more than a week of hearings, a decision was expected this week by the Interstate Commerce Commission on that phase of the railroads' Ex Parte 162 petition which seeks authority to make the proposed 25 per cent increase in freight rates effective May 15 on one day's notice. Also involved is the Ex Parte 148 proceeding as reopened by the commission for purpose of determining whether immediate relief to the railroads should take the form of restoring the increases (averaging about 4.7 per cent) originally authorized in that proceeding and suspended since May 15, 1943.

J. Carter Fort, vice-president and general counsel of the Association of American Railroads, who represented the carriers in the proceedings, urged the commission to approve Ex Parte 162 in order to avert what he described as a "tragic transportation problem."

"The I. C. C. is charged with enforcing the Interstate Commerce Act and furthering the nation's transportation policy," he asserted in his oral argument, adding that such issues are not the responsibility of the Office of Price Administration, the Office of Economic Stabilization, the Department of Agriculture or other government agencies which have opposed the railroad petition. "The I. C. C. will still have a job when the O. P. A. is done away with," he predicted.

Commission Knows Conditions—Mr. Fort declared that there was no need for a "full hearing" on Ex Parte 162, because, he said, "the commission knows as much about the conditions facing the railroads now as it will know six months hence." Pointing out the railroads stand to suffer an estimated net loss of $345,000,000 in 1946, he said he could see no reason for making the Ex Parte 162 proceedings "an installment case."

"The Commission should not restore Ex Parte 148 alone and think that sufficient steps have been taken," he continued, adding that no changes have been made in the railroad rate level, with the exception of the Ex Parte 148 interlude since 1939.

Emphasizing that restoration of the Ex Parte 148 increases would not solve the railroads' problem of declining traffic and increasing costs, particularly the $620,000,000 a year in increased wages, Mr. Fort said that "if exceptions are taken into consideration, the 25 per cent rate increase actually would be between 18 and 20 per cent." He added that these increases proposed in Ex Parte 162 are "much better fitted to the present situation than are the rate advances proposed in Ex Parte 148."

Supporting Mr. Fort's testimony, E. H. Burgess, vice-president and general counsel of the Baltimore & Ohio, asserted that "relief far beyond Ex Parte 148 is needed." Declaring that the railroads' rate increase estimate is "both reliable and conservative,"

he told the commission that "the least you can do is to allow the rates to be brought up to a level which you believe to be adequate."

Edward H. Miller, attorney for the opposing O. P. A. and O. E. S., asked the commission to "thoroughly investigate all the facts" before giving the railroads an increase. He charged that the railroads failed to present reliable evidence during the proceedings and that they are not facing a financial emergency which would warrant an increase. Asserting that there were "too many coincidences" in the statistical reports and predictions of Dr. Julius H. Parmelee, director of the Bureau of Railway Economics of the A. A. R., Mr. Miller contended that "the country faces an inflationary period and railroad prices should be made to stand on their own merits." He added further that a "full meeting" should be conducted on Ex Parte 162, explaining that the O. P. A. and others opposing the increase had only 10 days to prepare their presentations.

James K. Knudsen, Department of Agriculture counsel, also called for a "full hearing" on Ex Parte 162, predicting that "we will make a better showing at that time."

"It is too soon for the I. C. C. to give ear to a plea to equalize agriculture with all other industries as to freight rates," he continued. "Agriculture, by virtue of high production, is contributing more than its share today to railroad revenues. It is true, as contended by Mr. Fort, that index prices are high in relation to the low 1935 period which Dr. Parmelee used adroitly as a starting point in his statistical testimony. But farm wage rates have risen 200 per cent higher since 1935. Railroad wages certainly didn't increase like that."

Times "Not Normal"—Declaring that "these are not normal times," Mr. Knudsen said that "everyone must share this unwelcome burden." In condemning the railroads' 25 per cent increase proposal, he added that "no attention was paid to the economic condition of industry for which exceptional rates were prescribed or of those which received no such preferred treatment," concluding that "rate relationships would not be preserved under the railroads' proposal."

Robert N. Burchmore, representing the National Industrial Traffic League, stated that the commission should reinstate the Ex Parte 148 increases and "then proceed to a full hearing on Ex Parte 162." Stressing the importance of maintaining rail transportation during the current "critical era," he said that "the record of testimony supported the necessity to grant the railroads immediate relief at least to Ex Parte 148." Mr. Burchmore calculated that restoration of Ex Parte 148 would give the railroads approximately $1,000,000 a day in additional revenue.

Frederick G. Hamley, general solicitor of the National Association of Railroad and Utilities Commissioners, spoke for 17 state commissions in expressing opposition to any immediate increase. Discounting the railroads' contention that an "emergency" exists, Mr. Hamley said that "any interim rate increases would be detrimental to public interest to a greater degree than the withholding of increases would be detrimental to the railroads."

Approximately 30 other witnesses, mostly representing shippers and industry, also testified in opposition to the petition. Although some favored restoration of Ex Parte 148, the general feeling was that no action should be taken on the 25 per cent boost until a "full hearing" is conducted.

Wallace Finds Rates "Low"—A statement filed by Secretary of Commerce Henry A Wallace aroused attention in that, although opposing the 25 per cent increase, he has held, according to Mr. Fort, that "because the general price level has advanced much more than rail rates, the present rate levels are, in fact, relatively low."

"Any immediate increase in railroad freight rates which the I. C. C. may find justified should be held to the minimum, pending further requirements of the carriers to enable all parties to examine thoroughly the financial effect of the railroad proposal upon the national rate structure and the commerce within and between the several regions of the United States," Mr. Wallace said. "There are several basic reasons why it would be desirable to hold any freight increases to the minimum. First, the economy is in a transitional stage, from a war basis to a peace basis. The problem is to maintain full employment and to stimulate full production without a runaway inflation.

"In this situation, the economy is struggling to establish balanced relationships at the present level of prices. Because of rising costs and maximum prices, the margins for the different production and manufacturing agencies are narrow. A sizeable increase in freight rates would further disturb these relationships and therefore threaten the achievement of maximum production and unduly extend the reconversion period."

Testimony by officials representing government agencies was heard during the concluding sessions of the hearings, prior to the start on May 11 of oral argument.

N. E. Dodd, under-secretary of agriculture, told the commission that the railroads, in performing a "splendid service" during the war period, were "handsomely reimbused" for their efforts. Pointing out that the capital structure position of the railroads today is better than it has been for many years, Mr. Dodd said that the burden of transportation costs on agricultural products is already heavy and that "our present and prospective trade will be stifled if an additional 25 per cent increase is added."

"In the last five years, the railroads have aggregated a total net income, prior to payment of taxes, of $7,267,898,170," he continued. "That is approximately 12 times the net income of $595,559,538, before payment of taxes, in the five pre-war years. In December, 1945, the railroads had on hand $2,252,000,000 to take care of immediate needs. These facts demonstrate that the railroads are not in immediate danger of financial collapse, despite the fact that their costs have been rising. Normally, when a public utility experiences a great prosperity and improvement in its financial position, the regulating agency may be expected to give consideration to the reducing of rates in the public interest."

Contending that the situation is not as "critical" as the railroads describe it, the witness asked the commission to carefully consider the carriers' "hit-and-miss" 25 per cent increase proposal. He said the rate increase not only would affect the foreign relief feeding program, but also would have adverse results on government subsidies on food production.

Mr. Dodd also emphasized what he termed "disastrous effects" the proposed increase would have on agriculture, notably wool, dairy and poultry products, fruit and wheat. Predicting an increase in farm traffic in 1946 and 1947, he said that he "could not imagine a more dangerous threat to prospective prices than a hastily-prescribed 25 per cent increase effective May 15." He added that "nothing could be better calculated to materialize in inflation" than an additional distribution charge on food and other living necessities, pointing out that approval of the Ex Parte 162 selection would impair the effectiveness of the $2,000,000,000 a year the government was spending in an effort to meet higher food production costs without more burden to the consumers. He also stressed the current plight of dairy and poultry farmers, who, he said, now pay inbound freight charges on feed and outbound charges on their products.

Higher Farm Prices—In a brief cross-examination conducted by Mr. Fort, the witness admitted that during the past few years the prices farmers are receiving for their products had risen at a greater rate than the cost of production. He also agreed with President Truman's views on the favorable situation of the farmers today.

Supporting Mr. Dodd's statement, Harry C. Burnett, transportation specialist for the Department of Agriculture, urged the commission to consider the shift from land-grant military traffic to full-paying civilian traffic in addition to the increased earnings that will result following the cessation on October 1 of the land grant discount. He declared that the railroads did not point out in their petition that most of the traffic they have been losing has been moving on land-grant rates and that the types of traffic that are increasing pay the full rate. Estimating that the railroads should obtain $18,000,000 during the last three months of 1946 as the result of the abolition of land-grant rates, he pointed out that many of the items moving in steadily increasing volume are manufactured consumers' goods, which, he said, carry a high classification.

Parker McCollester, New York attorney, filed a verified statement on behalf of seven automobile manufacturers. The statement charged that the present rate structure favors the General Motors Corporation and Ford Motor Company and is discriminatory to competing manufacturers.

Asserting that a 25 per cent increase "would add to the aggravation of the matter," Mr. McCollester said that "rates from the Detroit area, South Bend, Ind., and Kenosha are unjustly discriminatory as compared with rates maintained from the assembly plants of General Motors and Ford." He added that increased rates on new autos would compel his clients to obtain other means of transportation to offset their rate disadvantages and would decrease rather than increase the railroads' revenue from automobile traffic.

Recalled for cross-examination, Dr. Parmelee told Mr. Miller that most of his estimates for 1946 were based on the theory that the war with Japan would continue through 1945. Mr. Knudsen questioned Dr.

Parmelee relative to the estimates of several individual western railroads, including the Chicago, Burlington & Quincy, the Northern Pacific and the Union Pacific, which showed expected decreases in agricultural traffic. The latter replied that traffic officers of the railroads involved had made up their estimates and believed that "they knew what was going on on their own properties."

Also recalled for cross-examination, J. E. Tilford, vice-president in charge of traffic of the Louisville & Nashville, identified a letter, introduced by Mr. Miller, which the former said he wrote to A. F. Cleveland, vice-president in charge of traffic of the A. A. R., on February 26, 1946. In the letter, Mr. Tilford had pointed out to Mr. Cleveland that certain studies might show a need for a rate increment of 39 per cent instead of the 25 per cent now asked. Mr. Tilford said the letter was written at the time of a meeting in New York of chief traffic officers to consider rate increases.

Testifying on May 9, Kirby Smith, general deputy housing administrator, declared that the proposed rate increase has "disturbing potentialities" which could seriously complicate the veterans' emergency housing program. The speaker pointed out that the increase in transportation costs of lumber alone would boost the price of the average small house by approximately $42.25. He said that the prospective nationwide building program would result in the transportation by rail of a large amount of construction materials and that the railroads' revenue would therefore be increased.

The proceedings also were marked by an American Trucking Associations' proposal, urging the commission to condition whatever general emergency relief is authorized on flat increases in l.c.l. rates, including pick-up and delivery service, in an amount not less than 20 cents per 100 pounds.

In outlining the plan of the A. T. A., its counsel, Samuel Earnshaw, declared that "by these proposals, the motor carriers do not seek to attain any unfair competitive advantage over the rail carriers. At the present time, east of the Mississippi River, the motor carrier rates on l.c.l. traffic generally are substantially in excess of the rail l.c.l. rates and in many cases will remain in excess of rail l.c.l. rates if our contentions are sustained. We believe that in fairness to the rail carriers, the condition which we seek should be coupled with a proviso which will enable the rail carriers to meet on a parity any lower motor rate not below their out-of-pocket costs."

In addition to Mr. Earnshaw, John C. McWilliams, representing the Southern Motor Carriers Rate Conference; C. E. Bellew, Middlewest Motor Freight Bureau, and J. D. Hughett, Southwestern Motor Freight Bureau, Inc., also appeared in behalf of the motor carriers.

Official documents ordering the 16 cents per hour wage increase for railroad workers also were entered into the record by Mr. Fort on May 9. He said that 18 railroad labor organizations had accepted the increment, the Brotherhood of Railroad Trainmen and Locomotive Engineers being the only exceptions.

Three O. P. A. officials, Edward F. Phelps, food price division director; Roderick E. Riley, director of research, and Dr. Roy E. Curtis, transportation and public utilities division economist, also testified on May 9 in opposition to the railroads' petition. Other witnesses who appeared briefly included F. P. Aughnay, North Dakota Public Service Commission; H. S. King, Nebraska State Railway Commission, and John J. Bonebrake, director, division of formal rate cases, State of Kansas.

Meanwhile, in order to expedite the proceedings, a separate hearing was conducted before Examiner Myron Witters on May 8, 9 and 10, during which time approximately 35 witnesses, representing carriers, shippers and others affected by the proposed rate increase, testified. Verified statements also were entered in the record by numerous other witnesses.

Freight Car Loadings

Total loadings of revenue freight for the week ended May 11 were not available when this issue went to press.

Loading of revenue freight for the week ended May 4 totaled 671,311 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, May 4, 1946			
District	1946	1945	1944
Eastern	145,377	158,213	162,359
Allegheny	127,583	185,439	190,857
Pocahontas	14,805	51,629	54,811
Southern	115,520	130,015	123,653
Northwestern	96,783	132,291	120,922
Central Western	111,573	120,311	117,530
Southwestern	59,670	79,506	65,406
Total Western Districts	268,026	340,738	303,858
Total All Roads	671,311	866,034	835,538
Commodities:			
Grain and grain products	35,428	52,359	38,388
Livestock	18,366	17,629	15,857
Coal	32,606	143,441	170,672
Coke	5,746	15,279	14,407
Forest products	45,879	43,052	43,652
Ore	27,167	73,702	69,083
Merchandise l.c.l.	129,969	112,922	106,346
Miscellaneous	376,150	407,650	377,133
May 4	671,311	866,034	835,538
April 27	659,952	899,950	850,441
April 20	650,743	864,700	838,737
April 13	649,194	847,013	798,683
April 6	644,663	765,672	787,985
Cumulative total, 18 weeks	13,008,422	14,321,599	14,340,237

In Canada.—Carloadings for the week ended May 4 totaled 66,627 cars as compared with 65,183 cars for the previous week (revised figure) and 70,252 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
May 4, 1946	66,627	32,359
May 5, 1945	70,252	36,820
Cumulative Totals for Canada:		
May 4, 1946	1,189,947	625,013
May 5, 1945	1,197,282	671,165

Representation of Employees

The Brotherhood of Locomotive Firemen & Enginemen has replaced the Brotherhood of Locomotive Engineers as the representative of locomotive engineers employed by the Detroit & Mackinac, according to the results of a recent election which has been certified by the National Mediation Board. In other elections resulting in changes of representation, the Brotherhood of Railroad Trainmen replaced the Switchmen's Union of North America as representatives of yardmasters employed by the Minnesota Transfer Railway Company and the Order of Railway Conductors supplanted the B. of R. T. as the representative of road brakemen employed by the Spokane International.

The Order of Railroad Telegraphers retained its right to represent train dispatchers employed by the Peoria Terminal, the American Train Dispatchers Association being defeated in the election.

In additional elections in which employees formerly were without representation, the Brotherhood of Maintenance of Way Employees was chosen to represent maintenance of way employees employed by the Spokane International, the Pueblo Union Depot & Railroad, and the Peoria Terminal; the Railway Employees' Department, American Federation of Labor, was named to represent foremen and supervisors in the mechanical department of the New York Central, defeating the Railroad Yardmasters of North America, 668-556; the American Railway Supervisors' Association was selected to represent technical engineers, architects, draftsmen and allied workers employed by the Grand Trunk Western, and the Brotherhood of Railroad Signalmen has extended its coverage of Norfolk & Western signal department employees to include foremen.

All train dispatchers employed by the B. & O. are now represented by the American Train Dispatchers Association. At the time of the election, trick, relief and extra train dispatchers were represented by the A. T. D. A., while chief and assistant chief dispatchers were without representation.

An election involving the representation of blacksmiths, helpers and apprentices employed by the N. & W. resulted in an 87-87 tie between the Mechanical Department Association, which was authorized to retain its representation rights, and the Railway Employees' Department, A. F. of L., which had invoked the services of the board to investigate and determine whether those employees should be represented by the International Brotherhood of Blacksmiths, Drop Forgers and Helpers.

The board also certified the International Union of Mine, Mill and Smelter Workers, C. I. O., to represent the entire craft of maintenance of way employees, including foremen, employed by the Bingham & Garfield.

Southern Pacific Announces New "Daylight" Service

A new "Sacramento Daylight," linking Sacramento, Cal., with Los Angeles will be placed in operation on June 2, according to a recent announcement of the Southern Pacific. The new train will consist of lightweight, streamlined cars and will leave Sacramento in the morning, being consolidated en route with the "San Joaquin Daylight" from Oakland, and providing early evening arrival in Los Angeles. Northward, the train will leave Los Angeles in the morning, arriving in Sacramento in the early evening.

The new train will replace with through cars the present daytime service, which involves a change of trains at Modesto, the first time such through daytime cars have been operated. Equipment will consist of

an observation parlor car and coaches running through between Los Angeles and Sacramento. A cafe-dining car will be operated between Modesto and Sacramento, while the "San Joaquin Daylight" will consist of regular and economy dining cars and through coaches between Oakland and Los Angeles. The present schedules, which became effective April 14, will remain unchanged.

Other changes in Southern Pacific schedules that are planned for June 2 include the establishment of 48-hr. non-extra fare, daily train service between Chicago and Los Angeles via Tucumcari, N. M., and the Rock Island; between Chicago and San Francisco via Ogden, Utah, and the Union Pacific; and between New Orleans, La., and Los Angeles. Also on this date the streamliner "City of San Francisco" resumes its pre-war schedules of 39¾ hr. between Chicago and San Francisco and the running times of the "San Francisco Challenger," "Californian," "Pacific Limited" and the "Argonaut" will be materially reduced. The new schedules of these trains, as well as those of other lines, appeared in the *Railway Age* of April 6.

Committee Trims the Crosser Security Bill

(Continued from page 1027)

The committee's action in reporting the bill on May 9 forestalls the movement which was under way to have it discharged from further consideration of the measure. As noted in the *Railway Age* of April 27, page 888, the House was expected to vote about May 13 on the discharge motion which Representative Neely, Democrat of West Virginia, had filed with an accompanying petition bearing 218 member signatures as required under House rules.

The reported bill retains the Crosser bill's number, H. R. 1362, but it completely rewrites the original version, striking out everything after the enacting clause and inserting a substitute bill. The report estimates that the new and more liberal benefits provided in the proposed amendments to the Retirement act would require an additional tax of 1.7 per cent of payroll, as compared with 3.5 per cent required by those proposed in the original version. The remainder of the five per cent additional tax proposed is to make the retirement system actuarially sound. This, the report said, was of "primary importance."

Most costly of the amendments are those which would add new survivor-benefit provisions to the retirement system. Under the present law, an employee beneficiary has an optional right to allot a percentage of his retirement benefits to his surviving widow, in which case his own annuity is reduced. The bill would follow the Social Security Act's plan of providing surviving dependents with benefits in their own right, such benefits to be granted without reducing the benefit available to the employee. But whereas the original version would have made the survivor benefits about 25 per cent higher than those available under the Social Security Act, the committee substitute would make them the same as those of the Social Security Act.

Also, it would grant survivor benefits only in respect to deaths after 1946 where insured status is present, whereas the bill as introduced, in addition, proposed benefits for deaths before 1947 and for all survivors of annuitants and pensioners regardless of whether insured status was possessed by virtue of taxable earnings after 1936. With respect to the existing death-benefits, which the original version would have eliminated, the substitute bill preserves them so far as they have accrued up to January 1, 1947, reduced by such amounts as may be paid under the new survivor-benefit provisions.

New Disability Provisions — New disability provisions embodied in the reported bill provide for the payment of full retirement annuities to employees permanently disabled as a result of occupational injury or disease if they are disabled for any regular employment for hire and have 10 or more years of service; or if they are disabled for employment in their regular railroad occupation, having 20 or more years of service or being 60 years of age or over, and having a current connection with the railroad industry. In order to qualify for an annuity under the present law, a totally and permanently disabled person must have either 30 years of service or be 60 years of age or over; and one qualifying only by being 60 or over receives less than a full annuity.

The proposed "regular occupation" disability provisions are new, but the committee would limit benefit payments thereunder to employees thus disabled as a result of occupational injury or disease. The original version would have paid such benefits regardless of the cause of such disability.

The new minimum-annuity provisions of the reported bill are along the lines of those proposed in the original version. The present law allows minimum annuities to annuitants who were employees when they attained age 65 and had completed 20 years of service. The committee amendment retains those provisions and in addition would allow minimum annuities for annuitants irrespective of age who have, on the date their annuities begin to accrue, a current connection with the railroad industry and have, on such date, completed five years of service.

Under the present law the minimum monthly annuity is whichever of the following is the least: (1) $40; (2) 80 per cent of annuitant's monthly compensation but not less than $20; (3) annuitant's monthly compensation. Under the reported bill it would be whichever of the following is least: (1) $50; (2) $3 multiplied by number of annuitant's years of service; (3) annuitant's monthly compensation.

Also embodied in the substitute bill is that provision of the original version which would permit women employees to retire with full annuities at 60 years of age, provided they had 30 years of service. Women now have the same retirement provisions as men, i. e., that the full annuity is not payable until age 65, although those with 30 years of service may retire on reduced annuities between the ages of 60 and 65.

Meanwhile, the committee rejected other provisions of the original bill which would have extended the coverage to freight forwarders not controlled by railroads, to railroad-controlled trucking companies, and to certain companies whose services are used by railroads. Neither did it make the changes which the original version proposed in the definition of "employment relation" and the special crediting of prior service for red caps, and other proposals for crediting service and compensation.

Moreover, the committee not only rejected the original version's proposal to transfer the collection of retirement taxes from the Bureau of Internal Revenue to the Railroad Retirement Board, but proposes to take away from the latter its job of unemployment tax collector, giving that assignment, too, to the Bureau. "It seems desirable," said the report, "that the collection of the unemployment insurance tax should be handled by the agency set up primarily for tax-collection purposes."

No Sickness Benefits—In rejecting all of the original version's liberalizing amendments to the Unemployment Insurance act, the committee refused to go along on proposals to provide sickness and maternity benefits, and to increase maximum unemployment benefits from $4 to $5 a day while extending the maximum duration of unemployment benefits in any one year from 100 days to 130 days, i. e., from 20 to 26 weeks of five benefit days each.

The committee's decision to provide lower unemployment taxes during periods when the reserve is large is in line with the so-called "merit rating" plan. The proposal, the report said, "parallels the policy of the vast majority of the state unemployment compensation programs where, by various methods, rate reductions are granted when the experience is favorable."

The reported bill's provision with respect to the unemployment tax stipulates that the Secretary of the Treasury shall determine the balance to the credit of the Railroad Unemployment Insurance Account as of the close of business on September 30 of each year. If the balance thus determined is in excess of $350,000,000, the tax rate for the following calendar year becomes one-half of one per cent of taxable payroll. If the balance is $300,000,000 or more but less than $350,000,000, the tax becomes one per cent; $250,000,000 or more but less than $300,000,000—1½ per cent; $200,000,000 or more but less than $250,000,000—2 per cent; $150,000,000 or more but less than $200,000,000—2½ per cent; less than $150,000,000—3 per cent.

L. W. Baldwin Dies

Lewis Warrington Baldwin, president and chief executive officer of the Missouri Pacific Lines, died in St. Louis, Mo., May 14 at the age of 71. A review of his long career, which began in 1896 with the Illinois Central, will appear in the next issue of *Railway Age*.

Dispatchers and Carriers Agree on Wages

Agreement on wages between the railroads and train dispatchers represented by the American Train Dispatchers' Association was announced in Chicago on May 10,

by the Carriers' Conference Committee which represented the railroads in the negotiations. As a result of the settlement, train dispatchers will receive wage increases of $38.40 a month, applied to the scale in effect on August, 1945, the increase to be retroactive to January 1, 1946.

Originally the dispatchers had asked a 6-hr. day and no change in monthly rates of pay. After opening talks with the Carriers' Conference Committee were held on May 9, this demand was withdrawn and a new one for a wage increase of $72 a month was submitted, the final settlement being agreed upon after further negotiations the following day.

Purchasing Agents Plan May 27-29 Meeting in Chicago

The National Association of Purchasing Agents will hold its thirty-first annual International Convention at the Stevens hotel, Chicago, on May 27-29.

Among other speakers, John D. Small, administrator of the Civilian Production Administration, Paul A. Porter, administrator of the Office of Price Administration, and Lt. Gen. E. B. Gregory, administrator of the War Assets Administration, will deliver addresses on government policies and surplus materials availability.

Car Service Order

The Interstate Commerce Commission has issued Service Order No. 502 to prohibit railroads from installing or permitting the installation, in cars to be loaded with watermelons, of bulkheads which reduce or restrict the capacity of the car. The order, effective from May 18 until September 30 unless otherwise modified, suspends such tariff rules as those applying to Southern territory, which provide that the minimum weight for cars 36 ft. 6 in. or less in length will be applied to cars 40 ft. 7 in. in length when the latter are equipped with bulkheads so that the loading space does not exceed 36 ft. 6 in.

Federal Barge Lines Sees Big Deficits Ahead

Deficits of $1,497,661 for the current fiscal year ending June 30, 1946, and of $1,083,281 for fiscal 1947 are projected for the government-owned Inland Waterways Corporation, operator of the Federal Barge Lines, in the "Corporation Supplement" to the Budget for fiscal 1947, which President Truman sent to Congress last week. I. W. C.'s deficit for the fiscal year ending June 30, 1945, is shown at $193,110.

The submission was required by the Government Corporation Control Act of 1945 which requires the inclusion of government corporation budgets as part of the annual Budget. As the introductory statement put it, the supplement "presents, for the first time, the business-type budgets of wholly-owned government corporations."

The statement covering I. W. C. reveals that the corporation this year had to begin selling its government bonds to liquidate the deficit, its "earned surplus" having become exhausted. This will deprive the corporation of a major source of income, since returns from those investments have in the past been important offsets to losses from water carrier operations.

The surplus as of the end of fiscal 1945 was $106,548, a figure to which it had been reduced by operating losses from the $2,500,000 reported as of the close of fiscal 1938. The anticipated $1,497,661 deficit for the current fiscal year will create a debit balance of $1,391,113 in the surplus account, while the 1947 loss will increase that debit to $2,474,394. Thus, as the report put it, the financing of operations "will necessitate some liquidation of government securities."

More specifically, it is stated that during fiscal 1946 and 1947 the corporation's investment in government securities will be reduced by approximately $4,600,000—from $6,600,000 to $2,000,000. Some of the funds thus realized will be used for the purchase of additional equipment, but a part "will be used for operating expenses in view of the corporate deficit." Meanwhile, the accompanying financial statements show that the interest income will be down from fiscal 1945's $92,526 to $72,068 for fiscal 1946 and $20,000 for fiscal 1947.

"Benefits" Listed, Too — Implying, however, that the worth of the corporation is not to be gaged by the net income account, the report includes the usual citations of "benefits" to the public. "The corporation," it says, "operates on 3,100 miles of inland rivers servicing 20 terminals with 27 towboats and 272 barges. In the 21 years of its existence it has attracted a substantial amount of private capital to transportation operations on inland rivers. The difference between charges paid during this time on traffic routed via the corporation and the all-rail charges amounts to approximately $42,000,000. . . . In addition one of the major accomplishments of the corporation over a period of years that is not reflected on financial statements is that the presence of the corporation on the inland rivers has served as a stabilizer of rates in the Mississippi Valley."

The report goes on to say that the corporation's mission as a demonstrator of the feasibility of water transportation has perhaps been accomplished insofar as the lower Mississippi is concerned. "With respect to the upper Mississippi river, including the Missouri and Illinois rivers," it adds, "it is anticipated that these accomplishments will have been generally advanced by the end of fiscal year 1947. However, on the entire Mississippi river system the history of the last few years has been that no private common carrier has developed a type of common carrier service similar to that developed by this corporation. With respect to the Warrior river, it is quite doubtful that private enterprise can operate successfully on a common carrier basis until more tonnage has been attained and higher rates secured."

The matter of disposing of I. W. C. to private interests, as contemplated by the act which created the corporation, has recently come up for consideration in the Department of Commerce where it was stated this week that Secretary Wallace had suggested to the Bureau of the Budget that action be initiated looking toward that end.

April Operating Revenues 28.8 Per Cent Under 1945

From preliminary reports of Class I roads representing 91.9 per cent of the total operating revenues, the Association of American Railroads has estimated that the April gross amounted to $509,860,923, a decrease of 28.8 per cent below the $715,658,736 reported for the same 1945 month.

Estimated April freight revenues were $365,441,155 compared with $541,145,010, a decrease of 32.5 per cent. Estimated passenger revenues were $101,085,762 compared with $122,351,063, a decrease of 17.4 per cent.

The News Department is continued on page 1042.

Equipment and Supplies

LOCOMOTIVES

The CHESAPEAKE & OHIO is inquiring for 40 freight locomotives of 2-8-4 type.

The FINNISH STATE RAILWAYS are inquiring for 50 steam locomotives, 25 of which will be of 2-10-0 wheel arrangement and 25 of the 2-8-4 type.

GREAT NORTHERN.—This road is inquiring for 20 Diesel-electric locomotives, including three 2,000-hp. passenger locomotives, two 3,000-hp. passenger locomotives, three 3,000-hp. freight locomotives, four 1,500-hp. passenger locomotives and eight 1,500-hp. road switchers.

FREIGHT CARS

The PACIFIC FRUIT EXPRESS COMPANY (owned jointly by the Union Pacific and the Southern Pacific) has ordered 2,000 40-ton 41-ft. steel-sheathed refrigerator cars, of which 500 will be built by the American Car & Foundry Co. at Chicago, 500 by the General American Transportation Corporation at East Chicago, 500 by the Pullman-Standard Car Manufacturing Company at Michigan City, Indiana, and 500 by the Pacific Car & Foundry Co. at Renton, Wash. Authorization to purchase this equipment was reported in the *Railway Age* for January 26, page 255, and the formal inquiry was reported in the issue of March 23, page 657.

PASSENGER CARS

GREAT NORTHERN.—This road is inquiring for three 60-seat coaches, a coffee shop-observation car and a combination mail-baggage-express car to equip a new streamlined train for service between St. Paul, Minn., and Grand Forks, N. D., according to an announcement by F. J. Gavin, president. At

the same time Mr. Gavin also announced the Great Northern's plan to operate similar trains on the Puget Sound line between Seattle, Wash., and Vancouver. The estimated cost of the new trains, which will be identical in design and construction with equipment now being built for the "Empire Builder," is $700,000 each, including the Diesel-electric locomotives.

SIGNALING

The RICHMOND, FREDERICKSBURG & POTOMAC has placed an order with the Union Switch & Signal Co. for the signal material required to add a Style C control machine at AF Tower, Alexandria, Va., for controlling the three-track signaling between M. P. 98 and AF, involving Style A-5 electro-pneumatic switch layouts at M. P. 98 and at the Southern connection, M. P. 103, with the necessary automatic and home interlocked color-light signals. Traffic locking will be provided between M. P. 98 and AF on the middle track, and between the Southern connection and AF on the southward track which is also used by the Southern and the Chesapeake & Ohio. The present system of train control and cab signaling will be provided for the three-track signaling, with reverse running on the middle track. The field work will be done by the construction forces of the railroad.

Supply Trade

The **H. K. Porter Company, Inc.,** Pittsburgh, Pa., has opened a new district office in the Paul Brown Building in St. Louis, Mo. This will be the twelfth district office handling Porter-Devine-Quimby products.

R. E. Nelson, previously assistant manager of the Porter process division in Pittsburgh, will be in charge of sales at the new office for Porter process equip-

R. E. Nelson

ment, Devine refinery and process equipment, Quimby pumps and Porter locomotives. Mr. Nelson is a graduate of the University of Minnesota Institute of Technology, and before joining the Porter Company was affiliated for several years with the Mt. Vernon Car Manufacturing Company and the J. P. Devine Manufacturing Company, both of Mt. Vernon, Ill.

Gilbert H. Krohn has been appointed manager of sales for the Detroit, Mich., district sales office of the **Globe Steel Tubes Company,** Milwaukee, Wis., to

Gilbert H. Krohn

succeed **Arthur A. Loeffler,** who is retiring after more than 25 years of service with the company.

Willard C. Christianson, formerly assistant to the vice-president in charge of sales at the general sales office in Milwaukee, has been transferred to the Chi-

Willard C. Christianson

cago district sales office as sales agent. **Frederick K. Kress** has been appointed sales service supervisor to succeed Mr. Christianson.

Robert E. Mann has been elected president of the **Modern Supply Company,** Chicago, to succeed **E. A. Mann,** who has been made chairman of the board.

S. B. Applebaum and **H. L. Tiger,** former vice-presidents and directors of the Permutit Company, and **Norman E. Brice,** formerly a mechanical engineer with the same firm, have resigned in order to organize a new company—the **Liquid Conditioning Corporation**—which will conduct a general business in the field of water conditioning for industrial, municipal, railroad and household use. The offices of the new company are at 423 West 126th street, New York. Arrangements are being made for the construction of a plant at Linden, N. J.

Wallace N. Barker has been elected executive vice-president of the **Pullman-Standard Car Manufacturing Company.**

E. L. Ruggles has been appointed assistant general manager of the **Bird-Archer Company, Ltd.,** Montreal, Canada, with headquarters in that city. Mr. Ruggles will have jurisdiction over all technical and service engineering work of the company. **Jack E. Koyle** has been appointed district manager, with headquarters in Winnipeg.

The **Kinnear Manufacturing Company,** for almost 50 years makers of doors and door-operating equipment, has announced the publication of a new catalog containing information about the company's rolling service steel doors, rolling fire doors, window shutters, sectional overhead doors and bifolding doors.

Colonel A. H. Anderson, who, before he left for duty with the United States Army, had been with the **Bacharach Industrial Instrument Company** since 1923, has returned to the company as treasurer, a member of the board of directors, and manager of the heating division. Because of the entry of the company into instrumentation for the refrigeration and air conditioning trades, and its expanded activities in the heating field, he will devote his entire time to the management of this division.

E. B. Carpenter has been appointed district sales manager of the St. Louis, Mo., office of the **American Car & Foundry Co.** to succeed **L. W. Martin,** who has retired.

Born in Providence, R. I., Mr. Carpenter is a graduate of the Providence Technical high school and of the Worcester (Mass.) Polytechnic Institute with a degree in mechanical engineering. He joined

E. B. Carpenter

American Car & Foundry in August, 1927, as a shop student at the Berwick, Pa., plant and in April, 1928, was transferred to St. Louis as sales agent for the St. Louis foundries. In May, 1940, he was appointed sales agent at the St. Louis office, having charge of miscellaneous and railroad car sales.

Construction

DENVER & RIO GRANDE WESTERN.—This road has added several projects to a $3,000,000 improvement and construction program which was originally announced in the *Railway Age* of December 1, 1945. These include the following: Construction of a shop and garage for the Rio Grande Motor Way (a subsidiary of the D. & R. G. W.) at Salt Lake City, Utah; construction of a yard office and utility building at Monte Vista, Colo.; alterations and addition to the depot at Monte Vista; construction of a warehouse at South Denver, Colo.; construction of an ice house at Provo, Utah; excavating and loading of approximately 98,500 tons of smelter slag for ballast at Leadville, Colo.; adjustment of signal track circuits between Helper, Utah, and Thistle; purchase of radio equipment for the system; construction of bridge and building shops at Pueblo, Colo., and Burnham (Denver) and at Salt Lake City, Utah; improvement and extension of freight depot at Alamosa, Colo.; construction of facilities for new industrial district at Denver; installation of 90 suppression or by-pass units in Centralized Traffic Control districts; installation of end-to-end radio equipment; installation of 15.92 miles of gravel ballast between Alamosa and Monte Vista; remodeling of freight depots at Denver and Salt Lake City; replacement of sewer system at Burnham and construction of an enginehouse extension at the same point; replacement of coal stoker firing equipment with oil burners at Alamosa; and installation of improved material handling facilities at various points on the road. The total cost of this work will be $1,065,586.

Financial

CHICAGO, BURLINGTON & QUINCY.—*Annual Report.*—Operating revenues of this road in 1945 totaled $242,542,798, compared with $240,637,400 in the preceding year. Operating expenses were $174,150,921, compared with $145,854,303. Fixed charges were $8,267,574, compared with $8,740,376. Net income was $27,405,399, compared with $24,647,122. Funded debt, including equipment obligations, was reduced by $9,157,292 during the year, and interest charges were cut by $1,254,014.

CHICAGO, ROCK ISLAND & PACIFIC.—*Annual Report.*—Operating revenues of the Rock Island in 1945 were $192,046,910, compared with $190,401,106 in the preceding year. Operating expenses amounted to $136,084,801, compared with $115,477,735. Net income totaled $7,983,190, compared with $13,140,092. Current assets at the end of the year were $118,659,624, compared with $134,965,331. Current liabilities were $51,016,283, compared with $55,433,085. Long term debt was $301,258,054, a decrease of $13,795,116 under the $315,053,170 for a year ago.

COLORADO & SOUTHERN.—*Annual Report.*—Operating revenues of this road last year totaled $15,527,982, compared with $17,031,686 in 1944. Operating expenses were $10,949,735, compared with $11,306,062. Fixed charges were $643,926, compared with $723,520. Net income was $1,803,801, compared with $2,174,778. At the year end, the outstanding refunding and extension mortgage bonds, all of which are owned by the Reconstruction Finance Corporation, totaled $17,500,000, a reduction of $11,478,900, including $3,900,000 purchased by the Ft. Worth & Denver City, since May 1, 1935, the maturity date of the original issue.

GRAND TRUNK WESTERN. — *Annual Meeting.* — Stockholders of this road at their annual meeting in Detroit, Mich., were told that operating revenues for 1945 had totaled $36,279,000, compared with $35,522,616 in the preceding year. Operating expenses amounted to $29,539,000, compared with $27,450,541. Net operating income was $6,740,000, a decrease of $1,332,356, which was caused by the increased costs of labor and materials.

Dividends Declared

Albany & Vermont.—Semi-annually, $1.25, payable May 15 to holders of record May 1.

Great Northern. — Preferred, $1.50, payable June 21 to holders of record May 20.

Pittsburgh & Lake Erie.—$2.00, payable June 15 to holders of record May 20.

Pittsburgh, Youngstown & Ashtabula. — 7% preferred, quarterly, $1.75, payable June 1 to holders of record May 20.

Rutland & Whitehall.—Quarterly, $1.05, payable May 15 to holders of record May 1.

Troy and Greenbush Railroad Association.—Semi-annually, $1.75, payable June 15 to holders of record May 31.

Railway Officers

EXECUTIVE

Charles A. Skog, whose election to vice-president of the Grand Trunk Western (a part of the Canadian National System), with headquarters at Detroit, Mich., was reported in the *Railway Age* of May 11, was born in Eau Claire, Wis., and began his railway career as a clerk with the Canadian Northern (now Canadian National) in Winnipeg, Man., in 1912. In the following year he was appointed chief clerk at Duluth, Minn., and three years later commercial agent at Minneapolis, Minn. In 1917 he was named division freight and passenger agent at Duluth, and, in 1927 became assistant general freight agent of the Grand Trunk-Canadian National. In 1930, he was promoted to general freight agent and in 1943 to freight traffic manager. On July 1, 1944, Mr. Skog was advanced to general manager, with headquarters as before at Detroit, the position he held at the time of his election to a vice-presidency.

Charles A. Skog

H. R. Sampson, general traffic manager of the Chicago & Eastern Illinois, has been elected vice-president in charge of traffic, with headquarters as before at Chicago.

Charles E. Finley, assistant freight traffic manager of the Great Northern, and **Vernon P. Turnburke,** assistant to the president, have been elected vice-president, traffic, and vice-president, executive department, respectively, with headquarters as before at St. Paul, Minn.

Harry A. Mitchell, president of the Sacramento Northern, the Tidewater Southern and the Oakland Terminal at San Francisco, Cal., subsidiaries of the Western Pacific, has been elected vice-president and general manager of the Western Pacific, with the same headquarters, succeeding **Col. Edward W. Mason,** who will retire on July 1, but will remain in an advisory capacity until December 31 of this year.

FINANCIAL, LEGAL AND ACCOUNTING

John A. Tauer, assistant controller of the Great Northern, at St. Paul, Minn., has been promoted to controller, with the same headquarters, succeeding **George H. Hess, Jr.,** who has retired.

OPERATING

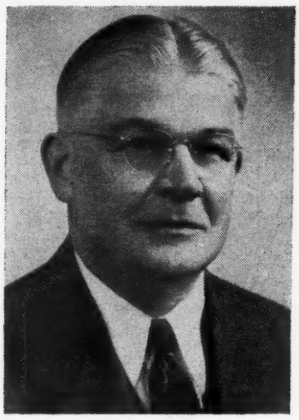
C. M. Self, chief operating officer of the Chicago, Indianapolis & Louisville, with headquarters at Chicago, has retired after 28 years of service.

Walter E. Branagan, agent for the New York, New Haven & Hartford, with headquarters at New York, has joined the Jay Street Connecting Railroad as superintendent, with headquarters at Brooklyn, N. Y., succeeding **E. H. Morgan,** who has resigned.

The Atlantic Coast Line has announced the following appointments in the operating department: **O. V. Horace** has been named superintendent terminals, Jacksonville, Fla. **J. J. Marshall,** formerly acting superintendent terminals at Jacksonville, has become trainmaster at Ocala, Fla. **A. M. Whigham** has been appointed trainmaster at Dunnellon, Fla., and **J. J. Stockard,** trainmaster at Dothan, Ala. **W. W. Allen** has been named terminal trainmaster at Waycross, Ga.

Nat E. Zitzman, whose appointment as superintendent freight transportation of the Pittsburgh & Lake Erie, and the Lake Erie & Eastern with headquarters at Pittsburgh, Pa., was announced in the March

23 issue of *Railway Age*, was born on May 30, 1890, and attended the University of Pittsburgh and Duquesne University. He entered railway service in September, 1909, with the P. & L. E. as a record clerk in the car service department at Pittsburgh, and transferred to the freight transportation department there in 1917. He subsequently advanced through various positions until he was promoted to chief clerk in June, 1928. Mr. Zitzman was appointed



Nat E. Zitzman

assistant superintendent freight transportation on August 1, 1941, and maintained this post until his recent promotion.

Frank J. Tally, superintendent of car service for the Norfolk Southern, has been appointed superintendent transportation, with headquarters as before at Norfolk, Va. Mr. Tally entered the service of the Norfolk Southern as an agent in 1916, and was soon transferred to the division superintendent's office at Raleigh, N. C., as timekeeper. He was advanced to general timekeeper, with headquarters at Norfolk in

Aufenger

Frank J. Tally

1919, and subsequently served in that capacity and others until his appointment as superintendent of car service on November 15, 1939. His recent promotion became effective on April 18.

F. L. Foster, whose appointment as superintendent for the Pittsburgh & Lake Erie and the Lake Erie & Eastern, with headquarters at Pittsburgh, Pa., was announced in the March 23 issue of *Railway Age*, was born at McDonald, Pa., on October 7, 1888, and entered railroading in

F. L. Foster

July, 1905, as a clerk with the P. & L. E. He subsequently advanced to chief clerk in 1917, assistant superintendent freight transportation in 1928, and superintendent freight transportation in 1930. Mr. Foster maintained the latter post until his recent promotion.

TRAFFIC

J. W. Stevenson, whose retirement as passenger traffic manager of the Illinois Central, with headquarters at Chicago, was reported in the *Railway Age* of May

J. W. Stevenson

11, was born in Chicago on September 17, 1888, and entered railway service in 1903 as an office boy for the Western Passenger Association. After subsequent service on the Chicago, Great Western as a rate clerk, he entered the employ of the Illinois Central in the same capacity in 1912. In two years he rose to chief clerk of the passenger department and in 1920, after a short experience as district passenger agent in Chicago, became chief clerk of the traffic department. In 1921 he was promoted to assistant general passenger agent, which position he held until May, 1943, when he was appointed assistant director of the passenger section in the division of traffic movement of the Office of Defense Transportation at Washington, D. C. He returned to the I. C. in October of the same year as assistant passenger traffic manager, and in March, 1944, he was promoted to the position he held at the time of his retirement.

Harry L. Knobel has been appointed traffic representative for the Wheeling & Lake Erie and the Lorain & West Virginia, with headquarters at Cleveland, Ohio.

Walter M. Crehore, commercial agent for the Southern at Spartanburg, S. C., has been appointed to the newly-created post of district freight and passenger agent at Greenwood, S. C.

Merwin R. Peake, traveling freight agent of the Minneapolis & St. Louis, with headquarters at Chicago, has been promoted to general agent at Duluth, Minn., succeeding **Clyde H. Stewart,** whose death on April 20 is reported elsewhere in these columns.

Malcolm J. Woods, general agent in the passenger department of the Canadian National at Philadelphia, Pa., has been transferred to Seattle, Wash., and **R. C. Curley,** city passenger agent at Chicago, has been named to succeed him at Philadelphia.

Albert C. Linton, whose promotion to passenger traffic manager of the Illinois Central, with headquarters at Chicago, was reported in the *Railway Age* of May 11, was born at Chillicothe, Mo., on October 21, 1884. After attending commercial college he entered railway service in August, 1905, as a stenographer in the city passenger office of the I. C. at Chicago. The following year Mr. Linton was advanced to chief clerk in the division passenger office at St. Louis, Mo., becoming chief clerk to the assistant general passenger agent at New Orleans, La., in 1911. In 1916 he was appointed traveling

Albert C. Linton

passenger agent at Memphis, Tenn., serving at that point and at Chicago until 1918 when he was appointed chief clerk in the general passenger office at Memphis. Mr. Linton was promoted to assistant general passenger agent, with headquarters at New Orleans, in 1920, and in June, 1927, he was advanced to general passenger agent, with the same headquarters. In December, 1945, he was appointed acting

passenger traffic manager at Chicago, the position he held until his new promotion.

J. W. Bourke, assistant general agent in charge of express traffic on the Great Northern, at Seattle, Wash., has been promoted to general agent, freight department, with the same headquarters. **C. A. Whims,** assistant general agent in the freight department, succeeds. Mr. Bourke as assistant general agent in charge of express traffic.

Edwin E. Smith, whose retirement as general passenger agent of the Pittsburgh & Lake Erie at Pittsburgh, Pa., was announced in the March 16 issue of *Railway Age,* was born on February 28, 1875, at Lithopolis, Ohio, and began railway service in 1895 as a telegraph operator for the Cleveland, Cincinnati, Chicago & St. Louis. He served subsequently as ticket agent, traveling passenger agent, and general agent, consecutively, in the passenger department of the C. C. C. & St. L. Mr. Smith went with the Pittsburgh & Lake Erie in March, 1920, in the post from which he has now retired.

Ross E. Chappell, whose promotion to general passenger agent of the Atchison, Topeka & Santa Fe, with headquarters at Los Angeles, Cal., was reported in the *Railway Age* of May 4, was born at Newkirk, Okla., on August 4, 1902. He entered railway service on October 15, 1920, as a ticket clerk on the Santa Fe at Newkirk, subsequently holding various minor positions at Tulsa, Okla., and Oklahoma City until May 15,, 1938, when he was advanced to division passenger agent, with headquarters at Topeka, Kan. On November 1, 1941, Mr. Chappell was transferred to Denver, Colo., and five years later he was promoted to assistant general passenger agent at Los Angeles, the position he held at the time of his new appointment.

Charles Fendrych, whose appointment as general passenger agent of the Pittsburgh & Lake Erie, with headquarters at Pittsburgh, Pa., was announced in the March 16 issue of *Railway Age,* was born on November 11, 1899, at New York, and attended Columbia University and New York University. He entered railway service in December, 1924, with the New York Central, holding various clerical positions at New York. He became secretary to the general passenger traffic manager at New York in 1931, then was appointed general agent in the passenger department there in 1937, in 1940 advancing to division passenger agent at Albany, N. Y. Mr. Fendrych maintained the latter position until he went with the Pittsburgh & Lake Erie (part of the New York Central System) in March, the time of his appointment as general passenger agent.

ENGINEERING & SIGNALING

William H. Phelps, assistant engineer in the chief engineer's office of the Southern Pacific, with headquarters at San Francisco, Cal., has retired after 43 years of service with the Southern Pacific.

R. H. Stenhouse, valuation statistician on the Canadian Pacific, at Montreal, Que., has been appointed engineer on the Dominion Atlantic (part of the C. P. system), with headquarters at Kentville, N. S.

W. W. Greiner, whose promotion to chief engineer of the Gulf, Mobile & Ohio, with headquarters at Mobile, Ala., was reported in the *Railway Age* of May 4, was born at Orange, Va., on February 10, 1905, and was graduated from Virginia Military Institute in 1926. He entered railroad service on July 5, 1926, as a student apprentice on the Southern, became assistant track supervisor at Dayton, Tenn., in 1928, and assistant to roadmaster at Somerset, Ky., in 1929. From 1930 to 1933 he served as track supervisor at Tuscaloosa, Ala., and as assistant trainmaster at Columbia, S. C., from 1933 to 1934, when he was appointed trainmaster at Orangeburg, S. C. Mr. Greiner was transferred to Richmond, Va., in 1937, and three years later to Birmingham, Ala. From January, 1942, to October, 1945, he served in the armed forces, from which he was discharged with the rank of colonel. He entered the service of the Gulf, Mobile & Ohio on January 1, 1946 as engineer maintenance of way, the position he held at the time of his recent promotion.

MECHANICAL

Hugh H. Young, whose promotion to superintendent of the car department of the Illinois Central, with headquarters at Chicago, was reported in the *Railway Age* of May 4, was born at Altamont, Ill., on February 27, 1904. He entered railway service with the I. C., on October 10, 1921, at Centralia, Ill., and on May 1, 1936, he was advanced to gang foreman, with the same headquarters. On January 1, 1944, Mr. Young was promoted to general car foreman, also at Centralia, the position he held at the time of his new appointment.

Hugh H. Young

Leo B. George, works manager at the Weston shops of the Canadian Pacific, at Winnipeg, Man., has been promoted to assistant superintendent of the motive power and car department, Western Lines, with the same headquarters, succeeding **D. F. Deno,** deceased. **William Douglas,** assistant works manager of the Ogden shops, with headquarters at Calgary, Alta., has been advanced to works manager at Winnipeg, replacing Mr. George, and **Peter Baron,** division master mechanic at Nelson, B. C., has been promoted to works manager, with headquarters at Calgary. **Arthur Baynham,** locomotive foreman at Winnipeg, has been advanced to division master mechanic, with the same headquarters, replacing **Gregor Grant,** who in turn has been transferred to Nelson, succeeding Mr. Baron.

OBITUARY

Clyde H. Stewart, general agent of the Minneapolis & St. Louis, with headquarters at Duluth, Minn., died at his home in that city on April 20.

Clarence A. Blood, who retired as assistant vice-president, traffic, of the Lehigh Valley in 1936, after nearly 60 years with the road, died at his home in Hudson View Gardens, N. Y., on May 4. His age was 89.

Harry Atkinson, assistant freight traffic manager of the New York region of the Baltimore & Ohio, died at his home in Maplewood, N. J., on April 11. Mr. Atkinson was born at Philadelphia, Pa., on October 30, 1884, and was educated at Drexel Institute and Oxford Preparatory School, Leeds, England. Before entering the service of the B. & O., he was with the Baltimore & Philadelphia Steamship Company, Eastern New York & New England Coal Association, Philadelphia & New Orleans Transportation Company, John Lucas & Company, Philadelphia, U. S. Shipping Board, and Judson Freight Forwarding Company. He went with the B. & O. in 1920 as freight representative at Philadelphia, where he was advanced to foreign freight agent in 1922, transferring to Chicago in 1925. Mr. Atkinson became assistant general freight agent at New York in 1928, then general New England agent at Boston, Mass., in 1937, returning to New York as general freight agent in 1939. In 1944, he was promoted to the post he maintained at the time of his death.

Lewis B. Lyman, executive assistant on the Chicago, Burlington & Quincy, with headquarters at Denver, Colo., died in a hospital in that city on May 8. Mr. Lyman was born at Dunlap, Iowa, on November 2, 1877, entered railroad service in 1895 as a station helper on the Burlington at Grand Island, Neb., and served in various minor positions until 1906, when he became trainmaster at Sheridan, Wyo. From 1908 to 1916 he served as superintendent at Sterling, Colo., Wymore, Neb., and Aurora, Ill., and was appointed general superintendent at Aurora in the latter year. In 1917 he was advanced to assistant general manager at Chicago, and in 1918 he became general superintendent at Galesburg, Ill., whence he was transferred to Lincoln, Neb., in 1922. Mr. Lyman was appointed assistant to the general manager at Omaha, Neb., in 1931, and served in that capacity until 1936, when he became executive assistant at Denver. In 1938 he served as assistant to the general manager at Chicago, and returned to Denver in 1939 as executive assistant, the position he held at the time of his death.

Step up the train load and speed capacity

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EXISTING LOCOMOTIVES

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THE LOCOMOTIVE BOOSTER*

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THE BOOSTER saves time by providing quicker pick-up. It enables the locomotive to accelerate rapidly to road speed and to maintain speed on grades. By making it possible to haul heavier trains at sustained speeds, it increases the earning power of the locomotive.

These railroads use the latest type FRANKLIN BOOSTER on freight locomotives

- Bangor and Aroostook
- Chesapeake & Ohio
- Lehigh Valley
- Missouri Pacific
- Pennsylvania
- Pittsburgh & West Virginia
- Reading
- St. Louis — San Francisco
- Soo Line
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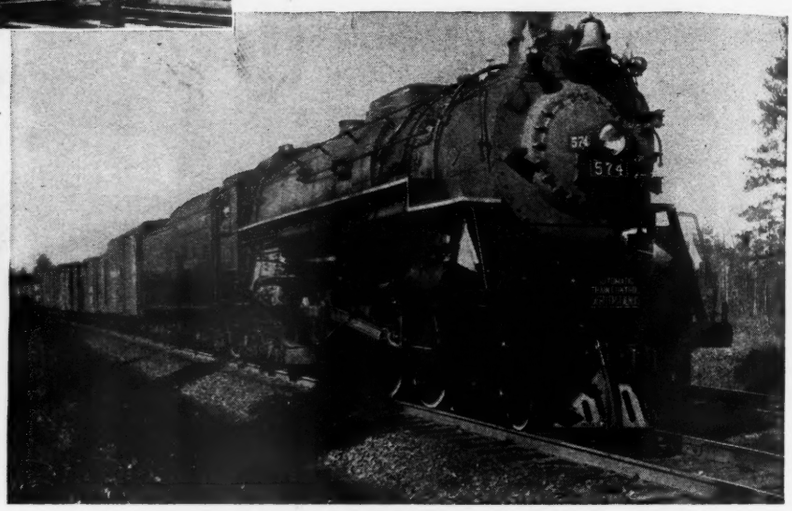
NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

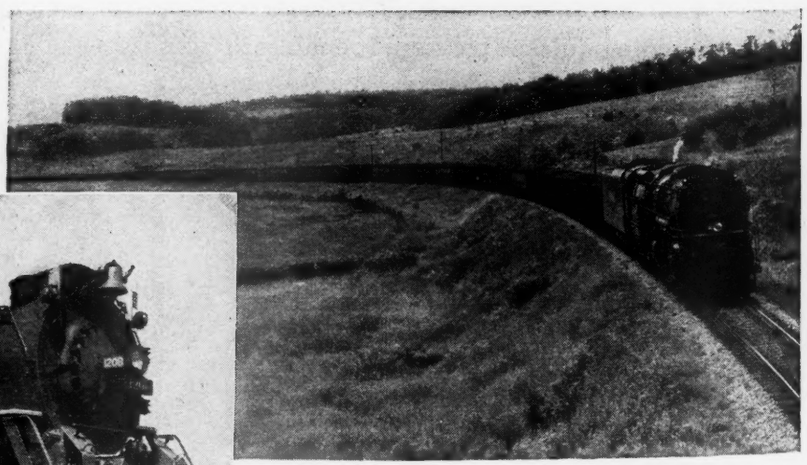
New York Central Lima-built 4-8-2 speeding tankers at 75 miles an hr.

Heavy freight on the R. F. & P. handled by a Lima-built 2-8-4.

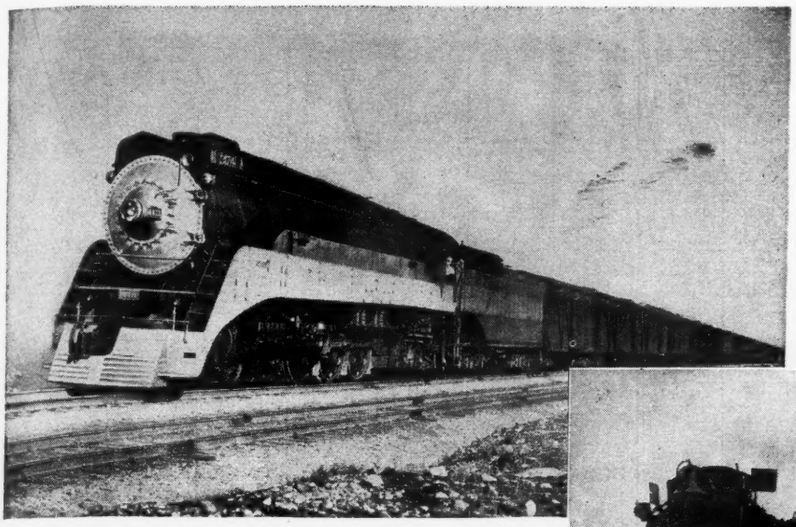


FREIGHT MUST MOVE

39 of these modern Lima-built 2-8-4s are used by the Pere Marquette in fast and heavy freight service.



The Virginian Railway uses Lima-built 2-6-6-6s for its tremendous coal traffic.



Lima-built 2-8-4s aid the Nickel Plate to meet today's demands for fast handling of heavy freights.

Southern Pacific uses its Lima-built 4-8-4s for fast freight service as well as for powering its famous Daylights.

Faster!

45 Lima-built 2-6-6-6s speed heavy C & O coal trains over the tough Allegheny grades.

Lima-built modern steam locomotives enable railroads to maintain faster schedules with heavier trains

LIMA
LOCOMOTIVE WORKS
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LIMA LOCOMOTIVE WORKS, INCORPORATED, LIMA, OHIO

REVENUES AND EXPENSES OF RAILWAYS

Month of March and Three Months of Calendar Year 1946

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income 1946	Net railway operating income 1945
Akron, Canton & Youngstown	March	171	$345,771	$89	$362,132	$70,001	$48,541	$25,898	$145,586	$312,969	86.4	$49,163	$18,633	$11,202	$67,665
	3 mos.	171	929,076	382	978,883	176,736	120,594	70,090	354,440	781,056	79.8	197,827	71,641	77,753	211,251
Alton	March	959	1,510,602	1,033,414	2,893,564	872,207	742,939	123,005	1,312,452	3,251,484	112.4	—357,920	227,891	—745,135	746,833
	3 mos.	959	4,283,643	2,405,541	7,659,585	1,495,136	1,625,942	263,113	3,260,124	7,104,754	92.8	554,831	556,813	—390,185	1,335,672
Atchison, Topeka & Santa Fe System	March	13,085	23,287,405	7,228,508	33,162,313	5,341,469	7,722,608	830,519	14,400,799	29,290,838	88.3	3,871,475	3,046,650	1,353,282	5,080,678
	3 mos.	13,085	68,519,885	24,543,703	100,575,682	13,930,893	19,425,539	2,113,729	36,239,557	74,022,298	73.6	26,553,384	13,738,429	13,078,118	14,441,333
Atlanta & West Point	March	93	199,933	84,860	325,361	47,465	64,332	13,813	175,773	323,419	99.4	1,942	*26,229	3,188	31,536
	3 mos.	93	565,742	275,102	955,915	139,563	162,556	37,372	489,829	891,935	93.3	63,980	*20,436	21,770	92,113
Western of Alabama	March	133	212,031	86,277	332,163	53,444	77,849	13,449	159,357	324,882	97.8	7,281	*18,804	23,077	39,274
	3 mos.	133	588,921	296,702	978,473	185,113	181,717	35,971	432,623	894,075	91.4	84,398	10,725	73,150	118,470
Atlantic Coast Line	March	5,569	8,101,795	2,729,175	11,638,894	3,365,528	2,430,263	303,843	5,650,584	12,329,579	105.9	—690,685	500,000	—1,525,556	1,345,336
	3 mos.	5,569	22,877,053	8,787,694	34,027,231	8,056,019	6,004,344	783,758	13,726,452	30,040,171	88.3	3,987,060	2,600,000	361,712	3,290,070
Charleston & Western Carolina	March	343	313,591	5,973	327,660	91,915	91,524	13,856	149,038	355,585	108.5	—27,925	25,000	—54,397	62,263
	3 mos.	343	859,187	20,816	905,784	245,907	222,467	34,588	387,131	911,265	100.6	—5,481	65,000	—74,949	153,297
Baltimore & Ohio	March	6,139	21,519,047	3,353,235	26,335,601	4,424,319	7,513,492	757,058	13,585,757	27,870,793	105.8	—1,535,192	1,814,761	—3,601,627	4,070,372
	3 mos.	6,139	59,160,986	11,068,019	74,474,786	11,296,573	19,051,750	1,750,846	34,029,007	69,952,920	93.9	4,521,866	4,928,378	—1,557,659	10,870,636
Staten Island Rapid Transit	March	29	155,677	114,001	279,716	49,455	41,244	1,427	166,873	287,155	102.7	—7,439	36,284	—60,913	87,896
	3 mos.	29	451,477	330,537	815,870	160,732	113,794	4,569	449,029	797,408	97.7	18,462	109,170	—146,573	214,471
Bangor & Aroostook	March	602	1,455,604	58,639	1,541,541	273,737	259,689	9,560	447,536	1,036,560	67.2	504,981	210,435	253,462	183,821
	3 mos.	602	3,582,265	173,200	3,834,977	702,711	630,366	21,874	1,120,394	2,591,248	67.6	1,243,729	519,801	629,611	448,397
Bessemer & Lake Erie	March	214	731,000	1,861	746,331	168,236	465,668	16,011	292,546	991,617	132.9	—245,286	49,233	30,361	134,718
	3 mos.	214	1,760,539	5,510	1,799,802	382,386	1,180,513	41,997	766,349	2,507,661	139.3	—707,859	142,498	67,004	—87,080
Boston & Maine	March	1,764	4,835,589	1,446,557	6,868,101	1,278,687	1,332,419	115,796	3,612,400	6,689,157	97.4	178,944	341,205	—506,573	1,013,221
	3 mos.	1,764	13,262,296	4,330,774	19,216,911	3,228,933	3,295,642	310,162	8,772,161	16,454,083	85.6	2,762,828	1,433,823	410,368	1,538,041
Burlington, Rock Island	March	228	199,943	65,411	283,331	51,200	32,046	4,396	115,146	220,767	77.9	62,564	8,794	11,693	56,534
	3 mos.	228	540,189	190,601	790,372	117,182	91,358	11,268	290,955	560,954	71.0	229,418	26,536	74,205	107,313
Cambria & Indiana	March	35	142,506	.....	142,562	14,923	51,251	857	25,813	100,076	70.20	42,486	64,020	71,816	50,434
	3 mos.	35	440,923	.....	441,089	33,039	146,380	2,081	66,842	270,332	61.29	170,757	202,082	243,677	149,529
Canadian Pacific Lines in Maine	March	234	509,189	65,510	603,816	86,627	102,137	8,817	284,703	493,451	81.7	110,365	24,213	—9,789	128,791
	3 mos.	234	1,475,564	210,902	1,778,916	180,275	265,194	24,915	709,384	1,216,249	68.4	562,667	71,735	217,645	350,897
Canadian Pacific Lines in Vermont	March	90	83,536	17,952	119,877	47,187	39,293	3,183	157,184	252,606	210.7	—132,729	12,091	—185,789	—127,784
	3 mos.	90	271,125	57,273	382,769	111,937	105,723	9,075	394,538	637,504	166.6	—254,735	33,413	—407,807	—386,748
Central of Georgia	March	1,815	2,112,492	433,958	2,818,850	537,020	582,853	92,092	1,534,188	2,924,078	103.7	—105,228	194,200	—296,091	502,694
	3 mos.	1,815	5,902,576	1,537,351	8,264,041	1,450,121	1,508,636	262,243	3,984,765	7,681,684	93.0	582,357	574,028	49,995	1,421,434
Central of New Jersey	March	649	3,465,521	558,737	4,277,972	500,268	812,347	69,595	2,047,711	3,612,408	84.4	665,564	405,792	74,701	845,279
	3 mos.	649	9,335,537	1,656,502	11,811,236	1,461,115	2,398,853	193,494	6,071,026	10,678,115	90.4	1,133,121	1,205,267	—534,942	1,434,477
Central Vermont	March	422	503,543	61,000	619,173	130,260	154,859	10,583	375,474	715,225	115.5	—96,052	48,502	—199,743	106,259
	3 mos.	422	1,545,406	235,000	1,929,659	322,378	391,511	30,415	1,057,828	1,898,381	98.4	31,278	132,952	—275,154	42,397
Chesapeake & Ohio	March	3,084	15,929,832	1,336,060	17,806,977	2,590,112	3,390,368	374,570	6,554,018	13,640,757	76.6	4,166,220	2,266,567	2,410,789	2,947,161
	3 mos.	3,084	44,357,022	4,481,474	50,398,943	7,148,243	8,789,263	903,637	16,096,508	34,745,133	68.9	15,653,810	8,004,815	9,678,669	8,167,365
Chicago & Eastern Illinois	March	910	1,484,165	379,825	2,100,442	352,861	595,313	90,312	1,137,969	2,306,319	109.8	—205,877	166,500	—496,288	341,717
	3 mos.	910	4,200,329	1,235,441	6,081,618	965,579	1,540,718	230,341	2,832,427	5,912,908	97.2	168,710	428,900	—594,109	757,157
Chicago & Illinois Midland	March	131	469,933	764	493,169	41,664	106,375	24,534	208,791	413,013	83.7	80,156	47,688	41,812	75,087
	3 mos.	131	1,398,780	2,674	1,465,340	127,728	290,441	75,521	509,799	1,090,485	74.4	374,855	182,622	197,203	213,997
Chicago & North Western	March	8,065	8,939,082	3,013,862	13,434,835	2,596,343	2,962,244	275,273	7,411,021	14,026,861	104.4	—592,026	975,345	—1,984,507	1,834,797
	3 mos.	8,065	24,883,674	9,052,542	38,251,297	6,367,615	8,015,224	739,785	18,032,951	35,023,353	91.6	3,227,944	2,734,033	—498,290	4,797,388
Chicago, Burlington & Quincy	March	8,863	13,024,667	2,372,811	17,001,233	2,644,207	2,855,486	414,828	7,284,204	13,932,757	81.9	3,068,476	1,600,661	1,070,599	2,668,474
	3 mos.	8,863	39,273,238	9,441,833	53,650,212	6,614,660	6,982,681	980,261	17,954,444	34,427,378	64.2	19,222,834	8,311,016	9,733,544	9,002,474
Chicago Great Western	March	1,500	1,972,831	201,770	2,405,581	482,496	420,068	92,852	1,370,439	2,470,163	102.7	—64,582	174,072	—433,510	253,278
	3 mos.	1,500	5,609,673	667,764	6,957,949	1,342,222	1,103,136	235,923	3,451,410	6,366,544	91.5	591,405	446,034	—510,339	717,475
Chicago, Indianapolis & Louisville	March	541	779,755	33,319	864,109	133,109	197,071	43,069	446,363	877,624	101.6	—13,515	65,055	—149,497	233,510
	3 mos.	541	2,121,968	140,989	2,403,057	307,322	521,586	107,202	1,081,265	2,161,772	90.0	241,285	170,803	—129,781	703,891

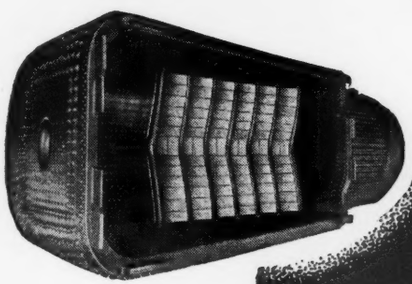
(Table continued on next left-hand page)

Eating up the miles... economically

● On the heavy haul and the long run, Security Circulators definitely improve locomotive performance.

In addition to improving the circulation of water over the crown sheet and in the side water-legs, Security Circulators reduce honeycombing, flue plugging and cinder cutting.

Security Circulators permit the use of a 100% arch, prolong the life of arch brick, and also act as struts or stays, bracing the firebox against undue distortion.



AMERICAN ARCH COMPANY, INC.

NEW YORK · CHICAGO

SECURITY CIRCULATOR DIVISION

REVENUES AND EXPENSES OF RAILWAYS

Month of March and Three Months of Calendar Year 1946

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income 1946	1945
Chicago, Milwaukee, St. Paul & Pacific	March	10,733	$12,455,710	$2,295,104	$16,456,229	$2,816,878	$3,774,335	$400,420	$9,297,546	$17,300,370	105.1	—$844,141	*$2,368,000	$966,150	$2,493,654
	3 mos.	10,733	36,297,731	8,262,318	49,557,651	6,989,157	9,498,675	963,225	23,177,109	43,071,980	86.9	6,485,671	517,000	4,371,390	7,524,705
Chicago, Rock Island & Pacific	March	7,652	9,464,112	2,752,682	13,262,096	2,026,426	2,666,973	442,421	6,167,109	12,137,310	91.5	1,124,786	327,401	111,536	3,017,792
	3 mos.	7,653	28,145,873	8,758,403	40,180,339	5,089,154	6,918,240	1,153,019	15,698,040	30,931,897	77.0	9,248,442	3,093,263	4,025,856	7,211,630
Chicago, St. Paul, Minneapolis & Omaha	March	1,616	1,762,751	280,621	2,253,602	424,979	496,706	59,983	1,451,244	2,543,561	112.9	—289,959	190,762	—625,803	362,112
	3 mos.	1,616	5,049,168	834,625	6,495,693	1,085,690	1,197,494	144,396	3,646,278	6,355,484	97.8	140,209	489,220	—827,428	824,582
Clinchfield	March	302	1,248,196	8,125	1,267,250	138,054	216,690	35,494	368,897	791,064	62.4	476,186	135,809	366,821	522,578
	3 mos.	302	3,467,456	24,346	3,523,758	318,042	524,926	80,577	961,144	1,959,050	55.6	1,564,708	405,691	1,234,704	1,592,234
Colorado & Southern	March	748	564,774	186,760	845,576	155,134	185,584	23,502	439,181	863,591	102.1	—18,015	82,587	—108,141	309.677
	3 mos.	748	1,722,530	627,625	2,628,005	510,199	518,695	61,134	1,147,657	2,387,891	90.9	240,114	220,291	—28,139	632,335
Fort Worth & Denver City	March	902	520,562	220,874	837,625	259,652	209,915	39,129	394,655	981,638	117.2	—144,013	*35,401	—131,772	140,833
	3 mos.	902	1,569,818	895,105	2,754,444	614,389	530,143	95,083	1,017,733	2,450,553	89.0	303,891	170,656	77,346	422,969
Colorado & Wyoming	March	42	65,522	.....	105,204	10,420	19,055	967	53,565	90,021	85.5	15,183	11,782	5,114	21,906
	3 mos.	42	134,761	.....	233,665	23,599	44,838	2,421	99,740	187,664	80.3	46,001	41,533	—6,722	67,554
Columbus & Greenville	March	168	130,851	6,852	146,217	31,631	21,765	4,934	49,397	122,313	83.7	23,904	16,841	6,525	19,300
	3 mos.	168	366,834	20,332	416,456	89,094	65,259	14,981	143,266	356,593	85.6	59,863	45,835	14,402	57,910
Delaware & Hudson	March	846	3,711,114	100,520	3,904,803	631,132	1,068,894	65,372	1,904,610	3,837,903	98.3	66,900	13,605	56,337	611,188
	3 mos.	846	10,269,347	423,374	10,953,015	1,482,345	2,691,511	166,027	4,702,784	9,457,032	86.3	1,495,983	703,087	839,721	1,159,574
Delaware, Lackawanna & Western	March	973	4,638,293	826,871	6,004,352	748,466	1,171,947	139,635	3,460,915	5,766,988	96.0	237,364	267,359	—57,219	1,362,928
	3 mos.	973	12,439,625	2,595,627	16,569,523	1,828,212	2,984,452	371,643	8,408,040	14,211,380	85.8	2,358,143	1,286,341	1,004,337	1,209,605
Denver & Rio Grande Western	March	2,386	3,147,782	688,592	4,069,608	520,397	1,288,092	131,319	1,962,801	4,148,956	101.9	—79,348	215,799	—288,508	1,398,227
	3 mos.	2,386	9,294,107	3,006,142	13,002,591	1,388,554	3,088,675	335,414	5,369,266	10,836,444	83.3	2,166,147	934,916	1,114,421	3,402,419
Denver & Salt Lake	March	232	275.924	6,974	293,737	62,496	67,447	3,701	129,618	275,602	93.8	18,135	36,618	25,157	81,465
	3 mos.	232	858,184	25,796	918,105	155,829	180,498	11,097	375,556	762,040	83.0	156,065	99,226	177,314	245,520
Detroit & Mackinac	March	230	89,751	3,347	99,681	22,187	19,053	933	42,572	91,644	91.6	8,037	5,309	—5,288	3,637
	3 mos.	230	253,526	11,578	284,625	51,507	48,434	2,352	111,579	229,511	80.6	55,114	13,794	20,472	2,264
Detroit & Toledo Shore Line	March	50	414,821	.....	416,130	41,095	34,181	11,872	152,842	250,375	60.2	165,755	51,833	42,090	65,600
	3 mos.	50	1,142,645	.....	1,146,605	97,684	93,262	30,740	377,478	626,781	54.7	519,824	168,581	148,999	189,520
Detroit, Toledo & Ironton	March	464	806,247	1,089	845,810	118,848	193,092	20,309	307,381	674,514	79.7	171,296	70,669	45,703	234,845
	3 mos.	464	2,499,205	3,200	2,623,241	312,884	487,622	52,867	790,036	1,730,294	66.0	892,947	346,459	397,149	744,866
Duluth, Missabe & Iron Range	March	546	186,711	3,272	213,331	357,638	433,538	8,692	356,585	1,209,266	566.8	—995,935	50,984	—1,050,120	—1,083,626
	3 mos.	546	445,212	13,045	531,833	903,168	1,107,753	18,955	913,417	3,084,679	580.0	—2,552,846	145,727	—2,705,156	—3,170,062
Duluth, Winnipeg & Pacific	March	175	236,000	1,800	242,600	58,257	47,902	2,640	125,298	239,504	98.7	3,096	22,213	—62,454	—6,971
	3 mos.	175	737,000	5,200	756,700	138,419	114,087	7,824	342,756	616,813	81.5	139,887	62,308	—30,503	9,003
Elgin, Joliet & Eastern	March	392	2,097,486	2	2,466,821	358,668	569,438	23,315	1,224,712	2,267,337	91.9	199,484	169,909	—32,805	576,060
	3 mos.	392	4,880,956	105	5,542,525	790,626	1,307,238	59,238	2,731,276	5,129,113	92.5	413,412	449,335	—350,761	1,387,154
Erie	March	2,242	9,115,343	804,111	10,608,103	1,134,016	2,392,377	286,636	5,759,429	10,240,166	96.5	367,937	863,196	—891,114	1,882,947
	3 mos.	2,242	25,088,344	2,556,225	29,668,012	2,824,617	5,869,558	741,507	14,647,278	25,739,314	86.8	3,928,698	2,335,709	207,947	3,601,472
Florida East Coast	March	682	1,844,202	881,636	2,948,328	298,094	414,978	62,982	1,129,433	2,069,683	70.2	878,645	254,027	495,951	396,598
	3 mos.	682	4,889,852	2,662,264	8,223,916	899,895	1,048,524	165,182	2,707,243	5,249,321	63.8	2,974,595	915,025	1,718,763	1,906,420
Georgia Railroad	March	328	541,937	85,343	669,168	114,066	158,339	29,769	354,183	686,256	102.6	—17,088	42,554	—57,223	180,485
	3 mos.	328	1,494,043	268,415	1,876,094	302,632	401,318	77,292	987,339	1,848,564	98.5	27,530	113,369	—70,855	525,290
Georgia & Florida	March	408	220,037	3,391	228,564	64,421	26,676	11,864	81,013	191,784	83.9	36,780	12,249	9,399	15,785
	3 mos.	408	579,827	10,231	605,178	161,055	78,960	34,054	226,941	524,433	86.7	80,745	36,028	4,447	36,811
Grand Trunk & Western	March	1,026	2,398,000	237,000	2,832,000	563,171	692,578	44,418	1,575,143	3,028,486	106.9	—196,486	220,949	—451,102	581,703
	3 mos.	1,026	6,328,000	678,000	7,535,000	1,487,826	1,732,500	128,119	3,997,957	7,714,012	102.4	—179,012	568,433	—857,499	1,438,481
Canadian National Lines in New England	March	172	182,000	9,200	218,400	62,194	33,982	2,310	159,249	283,948	130.0	—65,548	21,716	—127,890	—99,029
	3 mos.	172	468,800	26,700	580,100	164,902	110,310	6,863	365,453	713,480	123.0	—133,380	65,148	—310,764	—334,916
Great Northern	March	8,332	10,947,174	1,396,228	13,289,386	3,171,618	3,217,385	282,165	5,978,495	13,226,179	99.5	63,207	974,877	—1,108,052	1,481,096
	3 mos.	8,332	28,939,324	4,869,153	36,726,636	7,290,380	8,017,094	751,704	15,015,052	32,555,264	88.6	4,171,372	3,416,538	476,614	4,009,927
Green Bay & Western	March	233	234,711	326	240,931	50,693	27,640	11,403	109,698	212,561	88.2	28,370	28,581	—12,667	20,157
	3 mos.	233	678,702	1,011	694,343	133,383	74,858	33,864	285,312	561,958	80.9	132,385	85,202	13,420	67,242

(Table continued on second left-hand page)

These 29 veteran passenger units on the Atlantic Coast Line have operated an average of 988,945 miles out of an assigned average of 1,035,151 miles for an over-all average availability of 95.5% as of December 31, 1945.

UNIT	MILES OPERATED	MILES ASSIGNED	% AVAIL-ABILITY
500	1,323,914	1,375,107	96.3
501	1,195,723	1,303,522	91.7
502	1,125,296	1,148,227	98.0
503	1,077,959	1,104,635	97.6
504	1,119,229	1,161,878	96.3
505	1,180,428	1,215,990	97.1
506	1,059,303	1,084,915	97.6
507	1,029,631	1,067,332	96.5
508	1,141,024	1,228,835	92.9
509	1,042,529	1,109,747	93.9
510	1,049,490	1,060,036	99.0
511	1,080,136	1,132,598	95.4
512	1,113,510	1,162,155	95.8
513	1,045,309	1,149,318	91.0
514	1,020,698	1,064,832	95.9
515	1,000,104	1,044,617	95.7
516	777,877	805,724	96.5
517	802,334	859,376	93.4
518	725,944	743,157	97.7
519	698,182	757,144	92.2
520	815,133	865,244	94.2
521	685,265	710,488	96.4
522	691,774	709,364	97.5
523	716,562	754,523	95.0
750	1,094,873	1,120,137	97.7
751	1,163,988	1,226,422	94.9
752	942,795	1,054,947	89.4*
753	1,099,254	1,114,699	98.6
754	861,154	884,416	97.4

*Lost 72,513 assigned miles in 1945 due to wreck

GENERAL MOTORS LOCOMOTIVES

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS LA GRANGE, ILL.

REVENUES AND EXPENSES OF RAILWAYS

Month of March and Three Months of Calendar Year 1946

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income 1946	Net railway operating income 1945
Gulf, Mobile & Ohio	March	1,945	$2,980,782	$181,160	$3,258,374	$679,492	$733,424	$124,487	$1,468,536	$3,181,242	97.6	$77,132	$53,780	—$199,305	$376,593
	3 mos.	1,945	8,092,623	540,919	8,934,900	1,731,262	1,747,267	290,648	3,306,296	7,505,578	84.0	1,429,322	602,858	275,646	1,023,855
Illinois Central	March	5,081	12,393,155	2,806,172	16,270,534	2,867,500	3,428,299	320,524	7,379,002	15,106,753	92.8	1,163,781	1,009,326	30,704	2,399,745
	3 mos.	5,081	34,319,370	7,996,940	45,453,574	7,033,294	8,471,584	818,465	17,948,758	36,808,159	81.0	8,645,415	4,628,988	3,714,577	6,751,999
Yazoo & Mississippi Valley	March	1,524	1,806,558	383,845	2,303,175	560,886	338,366	50,398	1,126,991	2,205,344	95.8	97,831	230,388	—198,919	716,618
	3 mos.	1,524	4,962,145	995,436	6,292,962	1,413,732	816,766	125,034	2,704,758	5,344,930	84.9	948,032	642,627	102,215	1,180,582
Illinois Central System	March	6,605	14,199,713	3,190,017	18,573,709	3,428,386	3,766,665	370,922	8,505,993	17,312,097	93.2	1,261,612	1,243,958	—164,303	3,121,276
	3 mos.	6,605	39,281,515	8,992,376	51,746,536	8,447,026	9,288,350	943,499	20,653,516	42,153,089	81.5	9,593,447	5,284,714	3,828,530	7,947,320
Illinois Terminal	March	476	548,391	150,857	768,752	143,334	134,372	27,066	380,499	721,475	93.85	47,277	39,753	—12,688	139,788
	3 mos.	476	1,603,577	424,948	2,235,299	352,636	344,781	68,308	929,996	1,783,858	79.80	451,441	222,747	170,208	377,487
Kansas City Southern	March	890	2,082,969	236,956	2,507,953	279,009	440,883	84,683	872,605	1,806,804	72.0	701,149	225,000	328,028	465,174
	3 mos.	890	5,715,365	701,624	6,984,117	723,519	1,034,950	219,089	2,339,997	4,679,202	67.0	2,304,915	705,000	1,222,352	1,574,983
Kansas, Oklahoma & Gulf	March	328	306,034	1,529	310,625	40,242	33,964	15,456	104,520	209,634	67.5	100,991	37,397	41,556	98,622
	3 mos.	328	893,308	4,895	909,418	88,038	81,221	38,572	258,693	506,769	55.7	402,649	153,598	182,129	249,094
Lake Superior & Ishpeming	March	156	45,761	91	49,084	24,978	41,855	888	28,410	104,013	211.9	—54,929	22,723	—70,618	—39,514
	3 mos.	156	127,673	242	135,826	75,663	123,375	2,359	88,547	313,831	231.1	—178,005	77,923	—236,767	—195,379
Lehigh & Hudson River	March	96	242,695	.....	243,491	44,617	40,479	6,298	83,811	184,405	75.7	59,086	25,807	19,621	33,907
	3 mos.	96	657,803	.....	659,929	98,570	97,682	17,575	232,700	469,707	71.2	190,222	82,990	64,798	80,096
Lehigh & New England	March	190	567,658	.....	574,081	71,415	126,197	9,886	209,267	443,591	77.3	130,490	61,906	83,343	120,142
	3 mos.	190	1,498,479	.....	1,510,426	181,179	301,960	30,066	533,811	1,115,628	73.9	394,798	193,366	246,627	209,598
Lehigh Valley	March	1,254	4,495,582	708,293	5,572,434	742,918	825,438	142,511	2,881,616	4,892,545	87.8	679,889	294,055	201,971	695,012
	3 mos.	1,254	12,860,478	1,960,057	16,054,901	1,795,183	2,178,079	378,967	7,677,236	12,752,583	79.4	3,302,318	1,227,108	1,526,669	—4,637
Louisiana & Arkansas	March	756	947,683	99,022	1,089,299	174,099	183,197	46,606	380,092	836,224	76.8	253,075	58,449	124,919	185,168
	3 mos.	757	2,759,852	333,184	3,214,866	443,299	473,679	117,142	1,045,809	2,222,793	69.1	992,073	324,005	475,057	667,837
Louisville & Nashville	March	4,757	12,000,682	2,483,791	15,423,539	2,225,937	3,522,987	313,821	7,429,756	14,241,781	92.3	1,181,758	1,237,441	414,659	2,060,325
	3 mos.	4,758	34,074,923	7,135,529	43,952,953	5,556,173	8,728,373	749,576	17,912,061	34,742,202	79.0	9,210,751	5,694,131	4,961,959	6,366,536
Maine Central	March	988	1,711,044	215,125	2,025,950	371,022	378,004	17,465	991,272	1,815,674	89.6	210,276	97,898	—26,948	262,153
	3 mos.	988	4,757,466	643,056	5,717,864	917,499	986,238	45,419	2,462,987	4,570,889	79.9	1,146,975	462,204	313,829	495,295
Midland Valley	March	334	138,516	33	140,483	34,200	14,542	3,173	64,772	123,576	88.0	16,907	5,532	3,542	26,419
	3 mos.	334	388,232	78	394,466	74,451	39,766	8,492	152,474	292,912	74.3	101,554	38,288	38,869	71,779
Minneapolis & St. Louis	March	1,408	1,200,726	29,874	1,284,875	325,285	249,075	92,940	602,078	1,344,543	104.6	—59,668	23,078	—131,886	200,340
	3 mos.	1,408	3,379,103	138,116	3,674,427	797,382	625,580	255,050	1,479,849	3,352,036	91.2	322,391	237,106	—38,335	470,693
Minneapolis, St. Paul & Sault Ste. Marie	March	3,224	1,776,148	136,765	2,075,280	535,469	574,012	48,210	1,213,007	2,473,160	119.2	—397,880	186,122	—571,264	34,047
	3 mos.	3,224	4,702,763	431,141	5,584,457	1,284,961	1,321,920	130,573	3,061,775	6,048,100	108.3	—463,643	485,815	—936,803	—16,411
Duluth, South Shore & Atlantic	March	530	348,997	13,982	382,957	74,805	86,252	14,029	195,450	379,041	99.0	3,916	24,321	—40,109	41,649
	3 mos.	530	905,279	45,104	1,005,475	184,947	198,365	37,632	478,286	923,539	91.9	81,936	62,565	—15,951	52,050
Spokane International	March	152	104,566	2,921	116,469	25,000	19,082	3,087	40,042	93,963	80.7	22,506	6,069	10,199	25,186
	3 mos.	152	313,673	7,605	345,220	83,428	43,062	8,849	116,332	271,022	78.5	74,198	24,994	30,875	71,942
Mississippi Central	March	158	125,547	8,168	137,036	26,866	16,917	9,839	37,227	98,314	71.7	38,723	7,433	17,687	29,816
	3 mos.	158	348,412	21,392	379,812	86,735	50,717	28,642	108,843	296,469	78.1	83,344	22,005	22,325	80,794
Missouri & Arkansas	March	365	172,376	2,311	182,999	53,313	30,647	7,489	67,086	164,885	90.1	18,114	5,799	—5,214	—11,600
	3 mos.	365	425,779	6,209	462,261	135,838	74,038	22,581	197,161	448,751	97.1	13,510	18,325	—53,667	12,606
Missouri-Illinois	March	172	266,634	488	268,637	57,696	39,914	5,151	87,276	196,901	73.3	71,736	38,015	29,631	41,410
	3 mos.	172	711,142	1,169	717,439	123,151	97,091	14,221	214,984	470,926	65.6	246,513	120,276	115,743	111,058
Missouri-Kansas-Texas Lines	March	3,253	3,897,169	702,499	5,055,313	969,602	750,743	228,767	2,340,064	4,646,388	91.9	408,925	238,488	—45,792	755,578
	3 mos.	3,253	11,156,555	1,329,329	14,838,324	2,469,089	1,889,424	588,670	5,741,297	11,514,001	77.6	3,324,323	1,439,223	1,307,028	2,119,742
Missouri Pacific	March	7,080	11,566,180	1,788,251	14,545,571	2,850,846	3,107,681	395,385	6,673,025	13,757,595	94.6	787,976	83,158	97,410	2,802,308
	3 mos.	7,080	32,827,021	6,268,887	42,653,368	6,186,575	7,759,594	1,031,194	16,809,590	33,631,653	78.8	9,021,715	2,583,584	4,672,596	8,783,362
Gulf Coast Lines	March	1,734	3,127,139	254,295	3,516,412	692,400	442,522	81,423	1,122,394	2,447,766	69.61	1,068,646	142,764	652,264	703,420
	3 mos.	1,734	9,226,514	783,095	10,415,185	1,634,535	1,070,711	197,943	2,892,289	6,071,088	58.29	4,344,097	1,157,666	2,289,614	1,850,710
International-Great Northern	March	1,110	1,475,512	317,651	2,024,146	553,404	393,251	50,948	1,015,723	2,141,697	105.8	—117,551	127,090	—387,934	342,091
	3 mos.	1,110	4,401,843	994,426	6,114,052	1,331,713	994,115	131,141	2,536,906	5,315,030	86.9	799,022	314,267	36,750	636,649
Monongahela	March	170	618,513	1,471	623,067	100,151	73,480	788	213,403	392,297	63.0	230,770	73,762	57,435	140,797
	3 mos.	170	1,800,938	5,417	1,814,979	221,014	172,203	2,085	535,713	943,344	52.0	871,635	207,474	368,078	297,762

Monongahela	March	170	618,513													
	3 mos.	170	1,800,938		5,417	1,814,979		221,014	172,205							

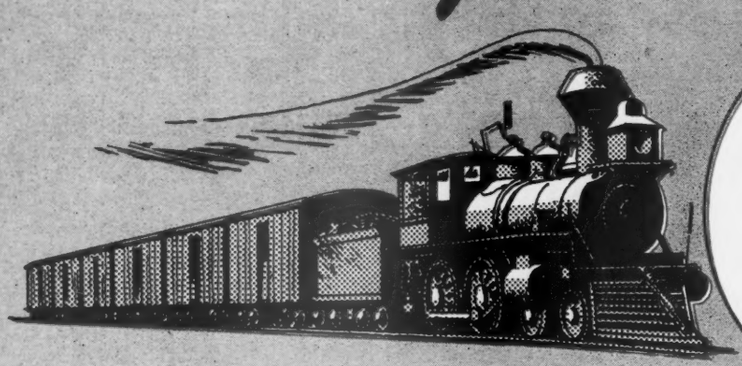
REVENUES AND EXPENSES OF RAILWAYS

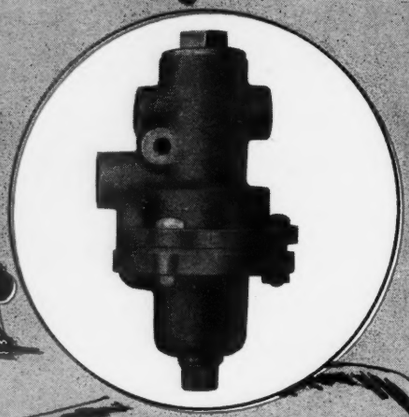
Month of March and Three Months of Calendar Year 1946

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income 1946	Net railway operating income 1945
Montour	March	51	$265,532	.....	$267,035	$18,322	$69,757	$1,547	$92,698	$191,404	71.7	$75,631	$46,993	$56,373	$51,097
	3 mos.	51	714,281	.....	718,709	50,107	201,749	4,620	260,013	543,898	75.7	174,811	130,967	150,447	121,431
Nashville, Chattanooga & St. Louis	March	1,053	2,001,950	$413,812	2,661,414	580,540	689,193	127,472	1,433,726	2,983,569	112.1	—322,155	176,563	—538,048	653,281
	3 mos.	1,053	5,402,073	1,340,750	7,446,389	1,539,381	1,619,337	297,140	3,327,871	7,057,279	94.8	389,110	429,593	—60,591	1,626,828
New York Central	March	10,746	34,875,832	12,031,408	51,596,657	8,689,367	12,473,944	1,028,953	29,296,450	54,809,907	106.2	—3,213,250	*3,172,131	—1,493,455	6,198,279
	3 mos.	10,746	96,994,857	37,062,131	147,734,602	22,612,946	32,358,535	2,545,682	72,537,355	138,239,984	93.6	9,494,618	5,108,439	49,336	11,129,956
Pittsburgh & Lake Erie	March	229	2,063,293	91,285	2,236,971	446,364	963,753	51,520	1,331,347	2,935,951	131.2	—698,980	*274,371	249,281	455,736
	3 mos.	229	5,464,666	281,144	5,961,077	1,119,869	2,518,228	144,105	3,039,613	7,198,362	120.8	—1,237,285	197,158	441,950	972,415
New York, Chicago & St. Louis	March	1,687	5,671,943	264,197	6,063,172	947,640	1,210,414	204,415	3,013,435	5,648,862	93.2	414,310	188,482	—81,710	1,200,848
	3 mos.	1,687	15,804,743	838,987	17,032,892	2,499,341	2,981,525	518,696	7,433,905	14,112,629	82.9	2,920,263	1,104,472	926,231	3,620,747
New York, New Haven & Hartford	March	1,838	6,419,584	5,010,562	12,448,323	2,135,835	2,322,833	224,131	6,758,677	12,449,957	100.0	—1,634	658,500	—1,830,840	2,068,686
	3 mos.	1,838	17,891,723	15,533,280	36,443,201	5,402,773	5,829,529	604,737	16,559,490	30,931,064	84.9	5,512,137	2,528,500	—127,280	4,111,983
New York Connecting	March	21	206,945	.....	214,063	46,927	14,325	.....	55,643	118,554	55.4	95,509	59,470	125,080	114,064
	3 mos.	21	547,906	.....	560,935	136,660	56,269	.....	185,448	383,484	68.4	177,451	183,935	358,016	341,198
New York, Ontario & Western	March	547	534,143	5,475	621,498	99,746	127,210	27,221	413,468	702,074	113.0	—80,576	46,932	—192,886	—113,836
	3 mos.	547	1,397,452	15,800	1,622,528	253,985	319,192	72,770	982,528	1,718,839	105.9	—96,311	115,983	—408,430	—661,571
New York, Susquehanna & Western	March	120	330,665	41,722	388,179	29,964	34,044	4,648	161,724	249,413	64.3	138,766	37,973	42,490	75,732
	3 mos.	120	918,563	123,753	1,089,348	88,601	100,482	13,006	464,122	718,249	65.9	371,099	118,025	62,907	127,802
Norfolk & Western	March	2,161	10,766,560	1,158,174	12,280,804	1,738,497	2,859,033	257,472	4,483,475	9,801,706	79.8	2,479,098	2,147,635	1,105,578	2,209,124
	3 mos.	2,161	30,896,437	3,500,095	35,338,984	4,438,691	7,092,768	612,063	10,627,026	23,932,254	67.7	11,406,730	6,931,043	7,015,805	6,376,316
Norfolk Southern	March	727	656,796	16,614	695,397	198,828	95,808	41,112	300,402	678,652	97.6	16,745	24,529	—56,969	66,135
	3 mos.	727	1,847,357	48,490	1,955,641	488,980	247,570	102,200	741,705	1,682,381	86.0	273,260	120,274	37,190	142,597
Northern Pacific	March	6,872	8,137,240	1,443,925	10,571,078	2,044,889	2,548,491	241,996	4,960,297	10,556,404	99.9	14,674	683,711	—386,161	1,361,894
	3 mos.	6,872	22,507,372	4,883,683	30,288,892	5,410,717	6,321,938	611,358	12,541,187	26,778,812	88.4	3,510,080	2,734,281	1,837,414	4,602,655
Northwestern Pacific	March	331	314,667	11,115	349,281	209,207	80,567	2,484	212,821	513,734	147.1	—164,453	25,485	—204,307	31,188
	3 mos.	331	896,364	16,462	975,856	541,551	203,355	8,703	561,897	1,341,161	137.4	—365,305	80,638	—519,830	158,093
Oklahoma City-Ada-Atoka	March	132	70,739	.....	71,955	25,600	5,445	1,384	31,653	68,641	95.4	3,314	*2,525	—6,614	14,186
	3 mos.	132	244,021	1	257,873	61,290	15,002	3,560	78,628	169,573	65.8	88,300	22,402	23,028	55,408
Pennsylvania	March	10,121	46,300,971	18,649,667	70,244,143	9,277,672	18,468,629	1,605,045	39,949,551	73,287,701	104.3	—3,043,558	4,745,297	—8,562,516	14,520,571
	3 mos.	10,121	124,842,383	57,823,925	198,093,525	22,388,498	46,110,648	3,684,749	99,864,481	181,931	91.8	16,161,814	12,031,318	2,809,926	26,346,219
Long Island	March	376	1,074,355	2,181,922	3,480,637	521,961	625,795	11,055	2,299,192	3,554,782	102.1	—74,145	465,919	—809,273	—96,024
	3 mos.	376	3,120,719	6,239,413	9,979,942	1,291,651	1,553,431	45,719	5,642,856	8,770,807	87.9	1,209,135	1,283,627	—869,738	—401,663
Pennsylvania-Reading Seashore Lines	March	390	392,868	280,676	699,816	177,571	122,942	8,223	558,065	897,364	128.2	—197,548	100,309	—399,164	—81,477
	3 mos.	390	1,137,967	695,313	1,915,187	519,518	325,238	21,531	1,414,041	2,355,615	123.0	—440,428	278,324	—1,009,876	—550,043
Pere Marquette	March	1,949	3,534,703	198,784	3,933,047	667,520	890,619	114,819	2,035,004	3,955,957	100.6	—22,910	209,672	—395,563	876,999
	3 mos.	1,949	9,993,302	623,837	1,137,570	1,777,021	2,310,148	281,715	5,155,089	10,103,405	90.7	1,034,165	767,290	3,042	1,947,165
Pittsburg & Shawmut	March	97	147,889	.....	148,613	27,956	35,429	3,204	53,171	126,701	85.3	21,912	4,692	13,082	25,003
	3 mos.	97	424,358	.....	426,509	61,988	85,605	7,310	135,639	309,057	72.5	117,452	13,802	89,518	64,968
Pittsburgh & West Virginia	March	136	370,997	.....	390,720	87,048	91,963	31,648	161,430	405,499	103.8	—14,779	31,328	—8,438	240,650
	3 mos.	136	948,188	.....	1,009,656	208,117	250,965	83,001	383,437	1,011,761	100.2	—2,105	83,435	15,398	635,322
Pittsburg, Shawmut & Northern	March	190	89,337	.....	90,368	16,566	14,534	1,152	40,470	78,593	87.0	11,775	5,805	—2,970	1,445
	3 mos.	190	264,882	.....	267,363	50,950	44,830	3,143	128,142	245,274	91.7	22,089	17,421	—20,751	—24,669
Reading Co.	March	1,362	7,811,420	944,582	9,162,210	1,425,088	2,093,022	123,842	4,581,954	8,529,929	93.1	632,281	512,175	80,313	1,176,346
	3 mos.	1,362	21,132,061	3,171,362	25,504,245	3,820,914	5,328,985	303,252	11,218,546	21,432,642	84.0	4,071,603	2,267,668	1,522,367	3,260,862
Richmond, Fredericksburg & Potomac	March	118	1,252,061	1,053,657	2,497,810	395,556	394,998	20,316	980,265	1,933,642	77.4	564,168	244,662	177,489	187,919
	3 mos.	118	3,471,649	3,139,365	7,149,898	892,125	935,831	49,493	2,455,942	4,690,368	65.6	2,459,530	1,051,568	1,044,011	569,821
Rutland	March	407	335,379	47,495	454,037	67,174	89,050	14,053	247,382	434,276	95.6	19,761	28,344	—18,188	5,365
	3 mos.	407	916,798	140,547	1,247,383	195,724	273,707	38,820	721,911	1,277,519	102.4	—30,136	81,392	—129,221	—206,436
St. Louis-San Francisco	March	4,645	5,967,854	1,119,751	7,761,113	1,906,088	2,072,570	230,668	4,162,380	8,842,122	113.9	—1,081,009	661,489	—1,683,445	1,615,114
	3 mos.	4,645	16,792,410	4,089,963	22,859,158	4,559,986	5,224,007	585,649	10,089,641	21,636,336	94.7	1,222,822	1,667,722	—265,186	4,459,044
St. Louis, San Francisco & Texas	March	160	289,252	20,038	319,603	70,702	44,775	13,918	154,252	293,558	91.9	26,045	16,166	—17,259	24,423
	3 mos.	160	751,053	73,111	853,241	137,550	109,058	36,598	374,642	682,770	80.0	120,471	39,914	47,190	81,387

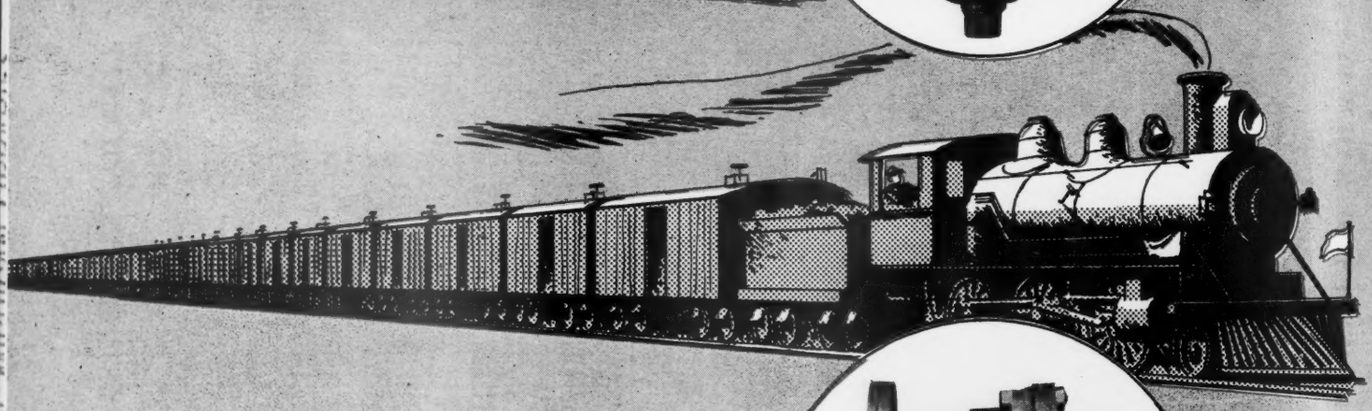
(Table continued on second left-hand page)

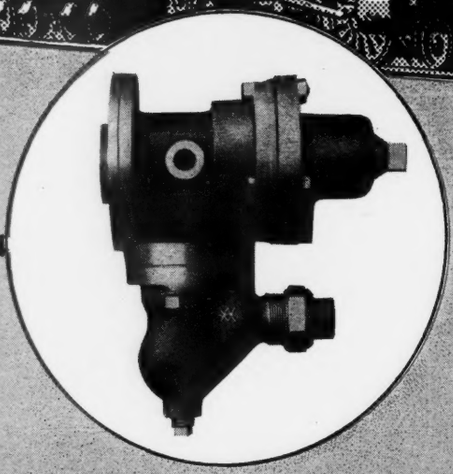
Freight Progress



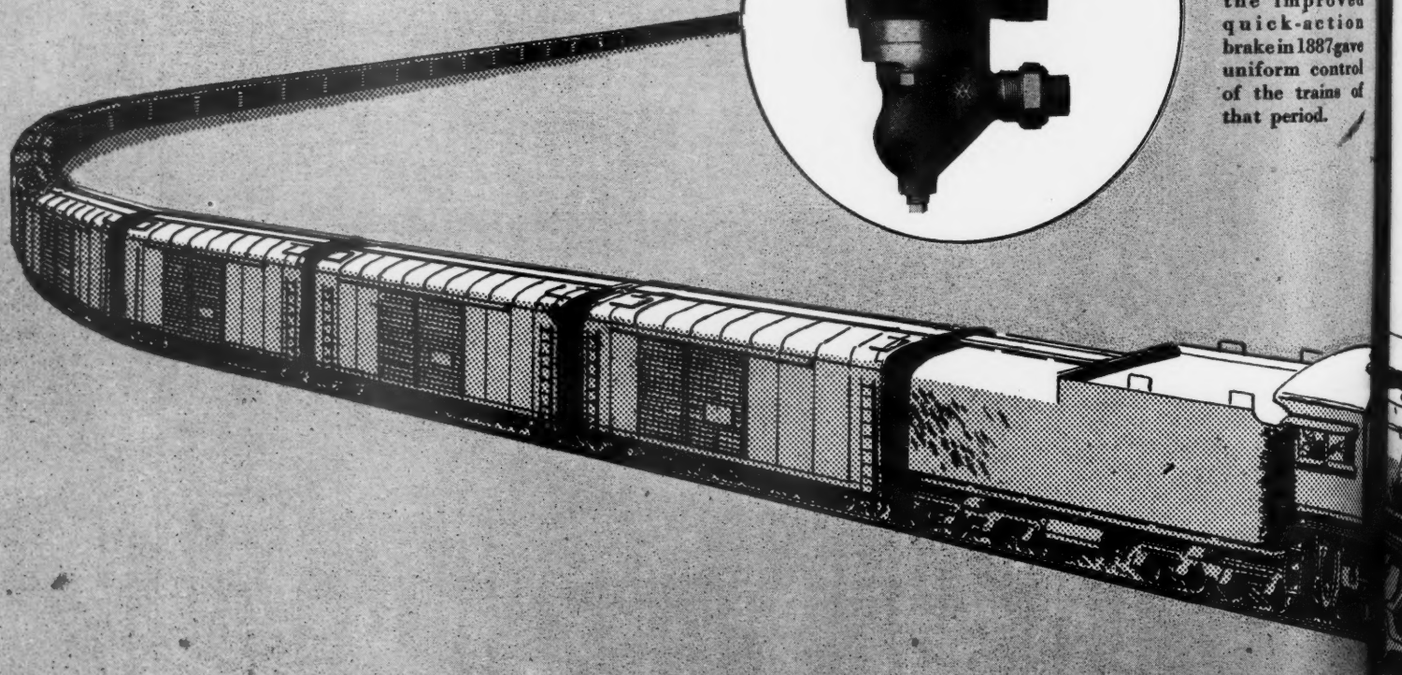


A new era in transportation began in 1880, with the general adoption of the Westinghouse Triple Valve for freight service.





Introduction of the improved quick-action brake in 1887 gave uniform control of the trains of that period.



Modern brakes give added safety and smoothness to today's longer, heavier, faster trains.

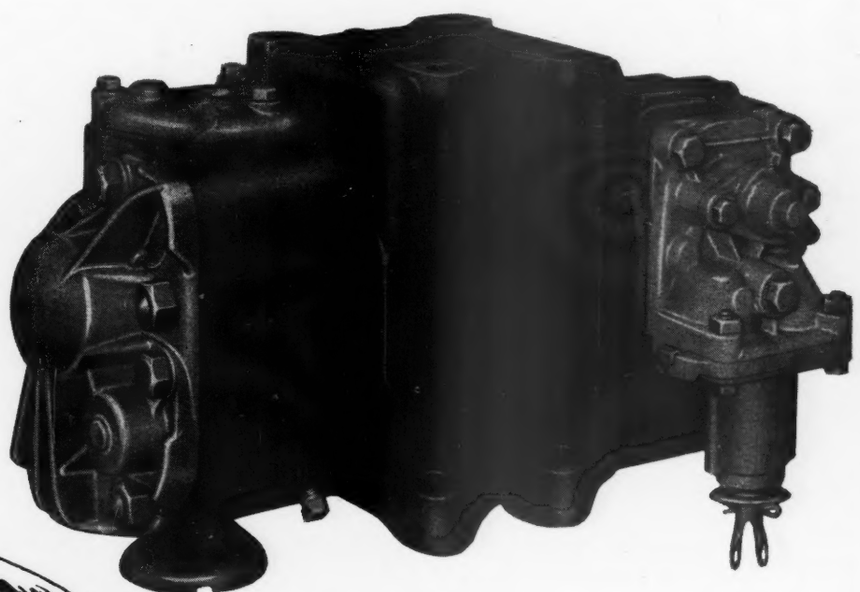
parallels *Brake Progress*

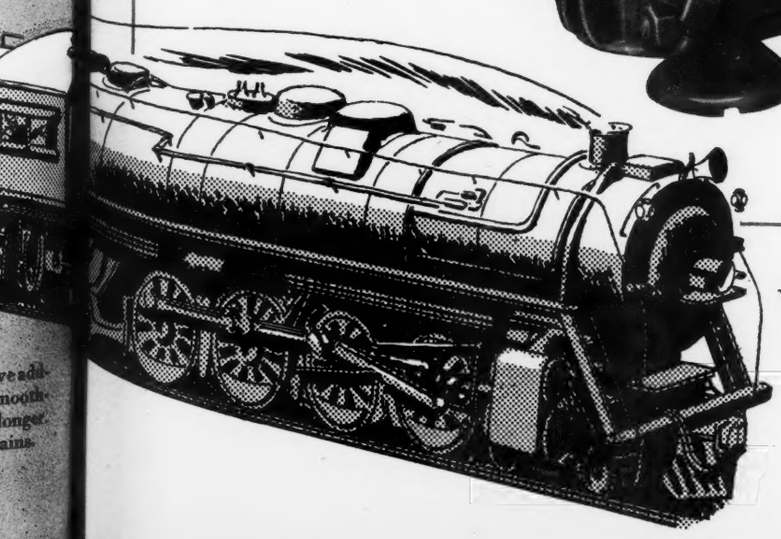
Every new advance in transportation during the past three-quarters of a century has brought new braking problems . . . and a brake to meet these changing conditions has always been available.

As a leading railroad publication put it, "The air brake is an outstanding example of an old device which has been subjected to a constant succession of changes and improvements which the genius of the inventor, persistent industrial research, and engineering effort have kept abreast of the needs of the industry which it serves."

The brakes that are *designed* ahead are important aids when you're *planning* ahead.

THE AB BRAKE FEATURES — quick application, positive release — give train control previously unattainable.





WESTINGHOUSE AIR BRAKE COMPANY

WILMERDING, PA.

REVENUES AND EXPENSES OF RAILWAYS

Month of March and Three Months of Calendar Year 1946

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income 1946	1945
St. Louis Southwestern Lines	March	1,576	$3,426,732	$163,250	$3,722,625	$700,998	$781,889	$139,490	$1,337,882	$3,137,970	84.3	$584,655	$224,611	$220,937	$1,057,315
	3 mos.	1,576	9,883,106	495,348	10,778,497	2,209,698	1,886,124	349,619	3,467,967	8,367,131	77.6	2,411,366	812,075	1,164,427	2,906,995
Seaboard Air Line	March	4,150	7,600,609	2,488,247	10,802,465	2,010,742	2,004,981	327,437	4,853,517	9,808,904	90.8	993,561	260,359	243,265	1,830,208
	3 mos.	4,150	21,149,440	7,427,316	30,667,185	4,690,925	4,997,773	823,437	11,622,704	23,619,856	77.0	7,047,329	2,169,942	3,585,290	5,300,695
Southern Railway	March	6,484	14,564,495	3,632,561	19,507,336	3,386,505	4,047,956	338,357	8,707,568	17,501,727	89.7	2,005,609	967,778	444,529	2,979,996
	3 mos.	6,484	39,883,361	11,283,763	54,967,549	8,442,650	9,943,004	922,373	21,105,957	42,749,904	77.8	12,217,645	5,410,030	5,592,851	8,477,785
Alabama Great Southern	March	315	837,239	233,287	1,148,177	264,959	320,062	28,670	544,216	1,228,490	107.0	—80,313	*1,522	—100,074	145,280
	3 mos.	315	2,392,890	876,248	3,510,449	631,279	838,712	78,729	1,335,733	3,068,832	87.4	441,617	291,981	106,910	525,448
Cincinnati, New Orleans & Texas Pacific	March	337	1,830,396	414,851	2,385,398	345,813	676,837	43,170	983,755	2,177,951	91.3	207,447	140,719	101,028	412,321
	3 mos.	337	5,160,683	1,258,580	6,868,870	932,141	1,745,149	120,967	2,406,334	5,512,477	80.3	1,356,393	738,112	763,251	1,190,631
Georgia Southern & Florida	March	397	372,327	130,214	549,083	106,232	77,816	5,619	258,693	468,021	85.2	81,062	29,515	12,334	58,610
	3 mos.	397	964,376	398,022	1,509,598	278,868	205,859	16,929	595,455	1,149,744	76.2	359,854	130,077	134,810	195,278
New Orleans & Northeastern	March	204	531,102	140,024	712,936	175,348	122,509	14,680	268,687	626,510	87.9	86,426	36,393	—8,912	98,203
	3 mos.	204	1,505,989	476,665	2,115,489	404,845	282,038	41,279	641,815	1,491,188	70.5	624,301	253,565	190,548	373,194
Southern Pacific	March	8,247	21,459,491	6,819,444	31,168,279	6,416,618	9,012,738	927,306	14,385,383	33,443,139	107.3	—2,274,860	*1,569,308	—1,809,404	3,435,289
	3 mos.	8,247	62,007,475	22,470,645	93,487,100	15,579,777	21,926,125	2,201,403	37,352,922	84,002,766	89.9	9,484,334	3,790,540	2,611,062	9,089,836
Texas & New Orleans	March	4,322	6,434,664	1,581,585	8,609,253	2,068,430	1,708,717	205,057	3,385,709	7,895,711	91.7	713,542	*1,899,006	2,168,364	1,233,493
	3 mos.	4,322	18,748,651	5,144,747	25,698,120	4,646,002	*4,219,254	523,662	8,703,665	19,389,818	75.5	6,308,302	310,584	4,721,974	3,379,745
Spokane, Portland & Seattle	March	944	1,543,853	80,320	1,729,804	506,191	216,393	22,379	669,999	1,499,538	86.7	230,266	134,037	43,271	251,513
	3 mos.	944	3,926,447	349,850	4,588,625	1,314,742	554,937	51,675	1,737,502	3,866,295	84.3	722,330	369,742	111,098	793,702
Tennessee Central	March	286	278,014	14,288	312,350	55,705	60,092	7,266	124,316	261,618	83.8	50,732	21,646	12,190	45,984
	3 mos.	286	748,791	54,523	856,674	170,402	166,146	19,779	371,459	770,648	90.0	86,026	63,888	—30,252	118,204
Texas & Pacific	March	1,874	3,070,319	983,490	4,494,235	793,964	885,328	184,794	1,738,190	3,984,509	88.7	509,726	108,023	276,241	573,294
	3 mos.	1,874	8,631,506	3,267,383	13,269,645	1,979,591	1,989,852	427,006	4,538,003	9,849,094	74.2	3,420,551	1,107,919	1,868,865	1,981,927
Texas Mexican	March	162	166,388	482	186,759	55,709	18,409	5,465	66,822	159,352	85.3	27,407	21,650	—4,075	26,339
	3 mos.	162	469,901	1,367	531,411	112,382	63,421	13,112	157,726	379,278	71.4	152,133	58,403	60,589	—42,231
Toledo, Peoria & Western	March	....	Dr. 11,176	103	—11,073	106	—86	97	216	4,540	....	—15,613	148	—15,769	141,946
	3 mos.	....	22,530	513	—22,042	327	1,800	126	4,459	19,794	....	—41,836	376	—41,755	516,633
Union Pacific System	March	9,775	20,004,718	5,418,904	28,170,725	4,533,728	6,867,691	798,243	13,111,784	27,503,020	97.6	667,705	604,377	—678,272	3,578,542
	3 mos.	9,776	59,844,261	19,101,521	87,507,230	11,256,889	17,323,104	1,893,368	33,308,949	69,458,339	79.4	18,048,891	9,001,590	7,075,182	8,848,665
Utah	March	111	166,073	.....	166,141	19,259	44,711	670	62,885	132,094	79.9	33,447	19,918	19,420	14,241
	3 mos.	111	497,739	.....	498,099	60,968	135,362	1,995	175,840	389,046	78.1	109,053	56,797	53,396	44,440
Virginian	March	661	2,558,817	7,177	2,644,983	322,951	751,638	35,942	669,432	1,851,247	70.0	793,736	434,700	487,339	613,876
	3 mos.	661	5,311,695	21,471	7,559,668	861,415	1,933,536	94,779	1,743,737	4,823,890	63.8	2,735,778	1,396,700	1,765,728	1,766,386
Wabash	March	2,393	5,490,988	689,297	6,613,797	1,110,496	1,228,681	242,393	3,344,247	6,279,873	95.0	333,924	*235,145	226,627	996,756
	3 mos.	2,393	15,577,229	2,142,524	19,040,131	2,653,360	3,031,443	609,761	8,359,820	15,484,696	81.3	3,555,435	1,050,446	1,586,641	2,561,002
Ann Arbor	March	294	560,538	5,617	575,508	76,755	107,957	23,376	306,313	533,147	92.6	42,361	26,298	—1,347	60,168
	3 mos.	294	1,466,212	17,809	1,511,521	178,881	279,148	57,613	753,585	1,309,514	86.6	202,007	103,450	67,279	143,323
Western Maryland	March	839	2,901,480	33,652	3,060,596	410,839	623,655	66,106	1,168,560	2,411,760	78.8	648,836	305,000	380,082	597,426
	3 mos.	839	7,716,627	134,844	8,214,697	1,001,064	1,540,103	173,643	2,864,629	5,933,422	72.2	2,281,275	985,000	1,394,203	1,773,808
Western Pacific	March	1,195	2,397,686	649,203	3,151,412	632,748	679,623	147,248	1,408,509	3,086,260	97.9	65,152	154,817	—170,288	574,200
	3 mos.	1,195	7,579,180	2,477,495	10,424,323	1,710,881	1,724,152	340,628	3,681,283	7,998,662	76.7	2,425,661	1,092,000	991,156	1,711,093
Wheeling & Lake Erie	March	505	1,711,728	9	1,759,561	279,054	399,113	58,164	759,877	1,569,394	89.2	190,167	228,376	151,023	341,158
	3 mos.	505	4,473,697	13	4,589,760	621,685	1,052,158	150,251	1,790,900	3,798,837	82.8	790,923	732,945	599,195	919,297
Wisconsin Central	March	1,051	1,672,729	83,087	1,904,676	275,264	406,729	48,725	1,071,767	1,882,420	98.8	22,256	133,901	—289,739	178,973
	3 mos.	1,051	4,668,292	285,812	5,408,690	673,418	956,734	133,913	2,727,579	4,694,487	86.8	714,203	353,422	—22,575	412,009

* Credit.

News Department continued on next left-hand page

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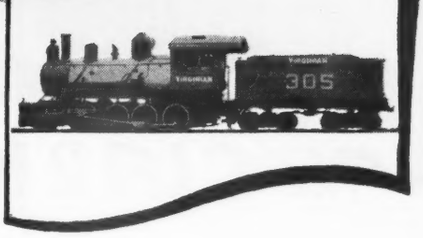

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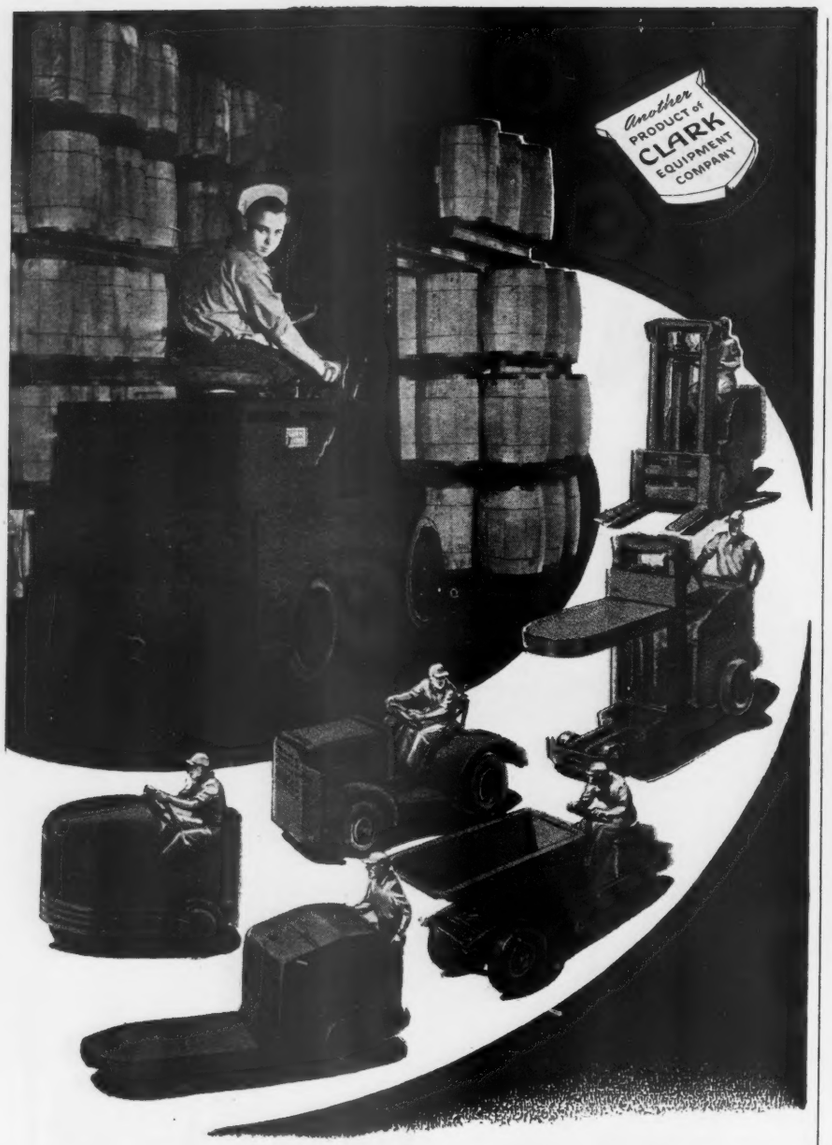
Valve Packing Rings	Light Weight Valves	Valve Rings, All Shapes
Valve Bull Rings	Cylinder Liners and Pistons for Diesel Service	



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NEWS DEPARTMENT

(*Continued from page 1032*)

I. C. C. Lets Allied Vans Acquire Agents' Operating Rights

Allied Van Lines, Inc., whose status under the Motor Carrier Act has been before the Interstate Commerce Commission for several years, has finally obtained commission approval of a plan whereby it will obtain nationwide operating rights as a common carrier of household goods. Reporting in the No. MC-F-2787 proceeding, the commission has approved transactions whereby Allied will build the nationwide rights for itself by acquiring the certificates of 325 of its former hauling agents.

Meanwhile the participating agents will in turn acquire control of Allied, which will be relinquished by the National Furniture Warehousemen's Association. The commission dismissed for lack of jurisdiction National's application for authority to divest itself of such control; and it likewise dismissed the application of the 325 participating agents for authority to acquire the control through purchase of one share each of Allied's capital stock. The divorce of National and Allied was to be accomplished in any event under the consent decree entered late last year in the United States District Court at Chicago In the anti-trust case brought by the Department of Justice against Allied, the National Association and some 550 of the latter's members.

Before meeting with success as it now has in the present proceeding, Allied made three other approaches to its objective. In No. MC-15735 it sought either "grandfather" rights or a certificate on the basis of a showing of public convenience and necessity. As noted in the *Railway Age* of February 23, page 419, the commission finally denied that application with a finding that Allied's past or proposed future operations did not fit the Motor Carrier Act's definition of a common carrier. Another approach, in No. MC-F-1775, was Allied's proposal for the pooling of traffic and earnings of its affiliates; but that, too, was rejected by the commission as noted in the *Railway Age* of October 9, 1943, page 578.

The present decision approving the acquisition plan follows generally the recommendations of Examiner Philip N. Crowley's proposed report (see *Railway Age* of December 29, 1945, page 1064). It finds that the purchase by Allied of the operating rights of the 325 or a less number of named motor-vehicle common carriers will be consistent with the public interest; and that if the transaction is consummated Allied will be entitled to a certificate covering the sellers' rights (with duplications eliminated) to transport household goods.

Conditions attached to the commission's approval of the plan stipulate that Allied shall cancel all agreements with hauling agents not participating in the transaction; that Allied and the participating agents shall cancel from their non-carrier agency agreements the restriction against such agents acquiring or possessing interstate rights; and that Allied shall submit for commission approval a proposed schedule showing the manner in which records and accounts shall be kept covering its entire operations.

A Dissenting View — Commissioner Rogers' concurrence "in the result" of the majority opinion is noted, while Commissioner Lee wrote a separate expression to explain his concurrence "in the result." Commissioner Alldredge dissented, and Commissioner Patterson subscribed to his view, while Commissioner Splawn did not participate in the disposition of the proceeding.

Mr. Lee outlined briefly the history of Allied attempts to obtain common carrier status, and went on to express his view that either the issuance of a certificate of public convenience and necessity or the approval, subject to appropriate conditions, of the pooling plan "is more desirable in the public interest than approval of the transaction proposed in the instant application." He concurred in the result of the majority opinion, however, because he was satisfied that "continuance of the service rendered by Allied is necessary in the public interest."

Dissenter Alldredge saw in the proposed set-up "no change in substance" from Allied's former plan of organization and operation which the commission found insufficient to qualify the applicant as a common carrier. Also, Mr. Alldredge mentioned the anti-trust angle, saying that presumably the court decree mentioned above "will be nullified by the finding herein upon considerations that, to my mind, are not entirely adequate or logical."

Meanwhile the majority had discussed this anti-trust phase, finding it "well-settled that if we approve and authorize a transaction under section 5, the parties to the transaction, by virtue of the application of section 5(11), are relieved from the prohibitions of the anti-trust laws to the extent of their authorized participation."

Alleghany Complaint Against M. P. and Frisco Trustees

Alleghany Corporation has filed with the Interstate Commerce Commission a complaint wherein it asks the commission to enter upon an investigation to determine whether Guy A. Thompson, trustee of the Missouri Pacific and Frank A. Thompson, trustee of the St. Louis-San Francisco, "have violated and/or are violating" section 5 of the Interstate Commerce Act which relates to combinations and consolidations of carriers. The complaint asserts that the Thompsons are brothers, and that both are members of the St. Louis, Mo., law firm of Thompson, Mitchell, Thompson & Young.

It goes on to say that the M. P. and Frisco are competing carriers, and then adds: "As brothers and as law partners, and in their capacities as trustees in reorganization for these respective railroads, the above-named defendants, without the approval and authorization of the Interstate Commerce Commission required by section 5(2) of the Interstate Commerce Act, and in violation of section 5(4) of said act, have entered into transactions within the scope of section 5(2) (a) thereof, and have accomplished or effectuated, or participated in accomplishing or effectuating, the control or management of said railroads in a common interest, and have continued so to manage and control, and

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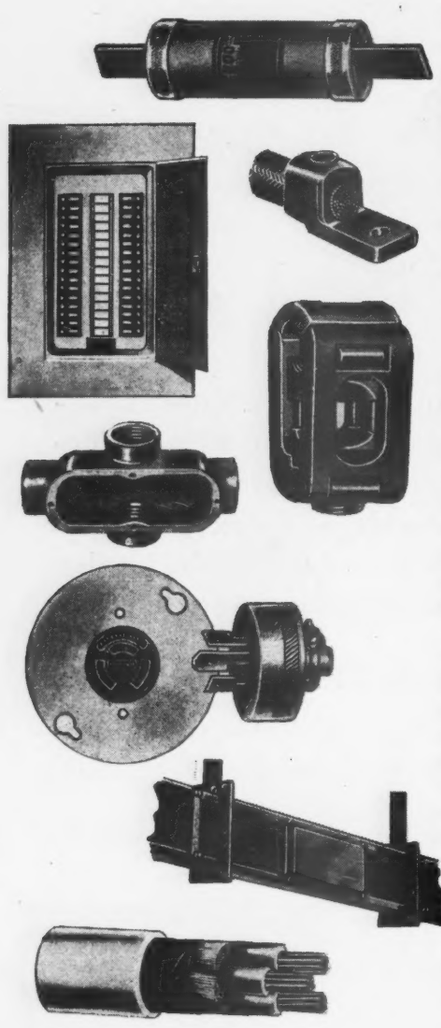

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are now managing and controlling said railroads in a common interest, in violation of section 5(4) of the act."

New York Central Releases New Film

A new sound motion picture entitled "The Railroad Signal" has been released by the New York Central System as the third film in its "Running the Railroad" series. It is a black and white 16mm film with a screen time of 17 minutes.

After a short review of the history of signal development "The Railroad Signal" takes its audience on a tour of a modern system, showing in operation modern automatic signaling equipment. Previous films in the series are "The Steam Locomotive" and "The Freight Yard."

Distribution of new film will be on a nation-wide basis through selected film libraries. Full information on this and other New York Central films may be obtained from the Motion Picture Bureau, New York Central System, 466 Lexington Avenue, New York 17, N. Y.

Northwest Shippers Meet

With nearly 200 persons present, the Northwest Shippers Advisory Board recently held its 76th regular meeting in the Hotel Alonzo Ward, Aberdeen, S. D. George H. Shafer, general traffic manager of the Weyerhauser Sales Company, St. Paul, Minn., and general chairman of the board, presided.

C. H. Dietrich, executive vice-chairman, Freight Claim division of the Association of American Railroads, spoke on "$100,000,000 Lost", referring to payments by railroads, express companies and motor truck lines on claims based on merchandise lost or damaged in transit. He developed the point that one way to reduce such expense is through more care in handling and packaging goods and the exercise of more diligence in making out bills of lading.

The next meeting of the Northwest board will be held at Duluth, Minn., on a date to be announced later.

Upholds Conviction of Miami Ticket Scalpers

Interstate Commerce Act prohibitions against discrimination and special favors apply to railroad employees acting on their own, and the related criminal provisions of the act's section 10 are also applicable to such employees, the United States Supreme Court ruled this week in upholding convictions of four ticket-office employees who were among those arrested at Miami, Fla., during the Federal Bureau of Investigation's March, 1944, drive on "black market" operations in railway and Pullman accommodations. The arrests were reported in the *Railway Age* of March 11, 1944, page 511.

The case, *Stanley Howitt, Flora Post Lee, James Dewhurst and Terrence P. O'Rourke vs. U. S.*, reached the Supreme Court on writ of certiorari from the Circuit Court of Appeals, which had upheld the conviction of the petitioners in the lower court. The first three of the petitioners named above were convicted for conspiracy to violate the act "in that they

conspired to collect and receive unjust and unreasonable charges for passenger transportation in violation of section 1(5) (a); to receive and collect greater compensation from certain persons than that which would be collected from others, in violation of section 2; to prefer particular persons to the disadvantage of others in violation of section 3(1); and to collect and receive compensation in excess of that fixed by tariff schedules in violation of section 6(7)."

These violations, as the court pointed out, are made a crime by section 10. It added that Petitioner O'Rourke "was charged with and convicted for committing substantative offenses of the same nature." Also, it noted that "the railroad played no part in these transactions."

The petitioners offered no testimony or other kind of evidence in the lower court to refute the government's case against them. Their sole contention, raised on demurrer, motion for directed verdict and exception to the charge of the jury, was that the indictment failed to charge, and the evidence failed to establish, a crime, since the act and section 10 in particular "are primarily aimed at railroads and do not make discriminatory or illegal charges by railroad employees for passenger transportation criminally punishable, unless the railroad is itself a party to the conduct." This contention remained the basis of the petitioners' case before the Supreme Court. In rejecting it, the unanimous court, speaking through Justice Black, had this to say:

"It is well established that one of the primary aims of the Interstate Commerce Act and the amendments to it was to establish uniform treatment of users of transportation facilities. . . . The act again and again expressly condemns all kinds of discriminatory practices. Railroad employees can accomplish invidious transportation discrimination, whether or not their conduct is approved or participated in by their superiors. Not only do the act's provisions against discrimination and special favors fail to exempt employees such as petitioners; but section 10 standing alone shows the clearest possible purpose to bar all railroad employees from overcharging for their own or for the raiload's illegitimate gain.

"The Interstate Commerce Act imposes the same duty on ticket sellers and clerks of common carriers as that imposed on railroad officers or other employees, to treat all the public alike as to the terms and conditions of transportation. Railroad accommodations are thus not to depend upon who will or can pay more because of greater need or a longer purse."

"Coronation Scot" Goes Home

The "Coronation Scot," British streamlined train that was sent to this country for exhibition in the New York World's Fair in 1939, which became marooned here following the outbreak of war, has been loaded aboard ship at the Locust Point terminals of the Baltimore & Ohio in Baltimore, Md., for its return journey to England.

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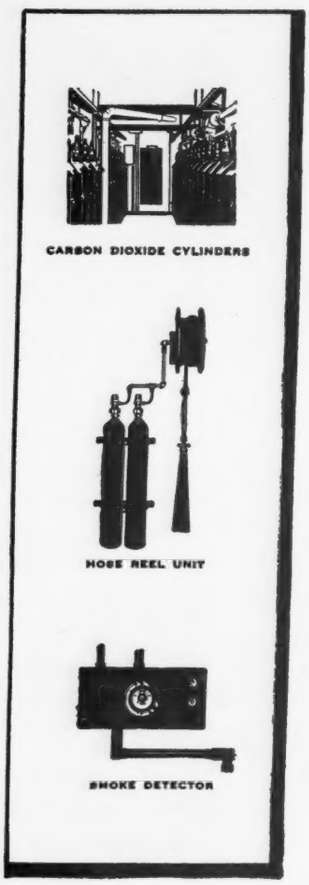

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grease, detached from the train and loaded on a ship for England. The submarine blockade was safely run and it was soon doing a war-time job on the tracks of the London, Midland & Scottish, where it is still in mainline passenger service. In 1943 the L. M. & S. offered the train to the U. S. Army for use as an officers headquarters at the Quartermaster depot, Jeffersonville, Ind., and it has been in that service ever since.

Somervell Says Production Is Key to Prosperity

The key to prosperity in the nation is the same as the key to victory in war—production and more production—General Brehon Somervell, president of Koppers Company, Inc., told more than 700 railroad and industrial executiyes who were guests of the company at a luncheon in Pittsburgh, Pa., recently. S. S. Bruce, Koppers' general traffic manager, presided.

Expressing confidence that with the same determination and unity of purpose which prevailed during the war, the country will achieve the requisite production, General Somervell paid high tribute to the work of the railroads in moving vital supplies and troops during the war.

"There were only two real crises in the whole of the railroads' war operations," General Somervell said. "One of those arose with the threat of labor disturbances in 1943 when the government took over the railroads and I was called on to head their operations. Because of the unstinted loyalty and cooperation which the railroads afforded us, both management and labor, we were able to turn the roads back to their own management in just a little over a month. I think the entire country was astounded at the speed with which this was done, and I know that the railroad executives were. The only other incident of note had to do with the handling of the redeployment traffic last summer. This arose primarily because of the failure to understand fully both the volume and the urgency of the movement. As soon as these points were established, matters got back into the groove and I am happy to learn that the regular services which were discontinued in order to handle that situation have since been restored."

Santa Fe Plans Air Service

The Atchison, Topeka & Santa Fe has begun negotiations for the organization of an affiliated company to engage in contract air transportation, which will be known as Santa Fe Skyway, Inc. For the time being the new company's service will be confined to freight cargo and it will offer specialized contract air service in the territory served by the Santa Fe.

Officers of the new company will be as follows: President, H. R. Dake, general manager of the Santa Fe's department of highway motor transport and vice-president of the Santa Fe Trail Transportation Company; vice-president and general manager, G. W. Lupton, Jr., formerly assistant to the president, Aero Services, Inc.; secretary-treasurer, Ray W. Kinzie, secretary-treasurer, Santa Fe Trail Transportation Company; assistant treasurer, C. W. Bish, as-

sistant treasurer, Santa Fe Trail Transportation Company; assistant secretary, H. G. Brandt, assistant general manager, department of highway motor transport and assistant vice-president, Santa Fe Trail Transportation Company; auditor, G. P. Chaffin, general auditor, Santa Fe Trail Transportation Company; assistant auditor, J. M. Chaney, assistant to the general auditor, Santa Fe Trail Transportation Company. All of these officers, with the exception of Mr. Lupton, will retain their previous positions and for the present will maintain headquarters in the Railway Exchange building, Chicago.

In making this announcement, Fred G. Gurley, president of the Santa Fe, said the new company will be manned largely by veterans of the military air forces and that surplus Army planes of the Douglas C-47 type will be used in the initial operations. Studies will be made of specialized equipment for the loading and transportation of cargo to best fit the needs of those who contract for such service.

Mr. Gurley also reported that the line will start with five airplanes of the type described above, which are capable of carrying 5,500 lb. of payload at a speed of 190 m.p.h., between Chicago and the West Coast. In this connection it was pointed out that the Civil Aeronautics Board has no economic control over lines whose operations are non-scheduled, as will be the case in the new organization, but will maintain control of safety regulations.

Would Protect Employer on Veterans' Seniority

Senator Gurney, Republican of South Dakota, has introduced S. 2140 to provide that "there shall be no liability for acts done or omitted in good faith by an employer with respect to re-employing veterans in accordance with regulations of the director of Selective Service or in accord with any applicable court decision." The provisions of the bill would be applicable until the Supreme Court rendered a decision on the "super-seniority" matter.

In introducing the bill, Senator Gurney explained that Selective Service regulations now require re-employment of veterans even though employees with greater seniority be displaced, whereas the recent decision of the United States Circuit Court of Appeals in the Fishgold case holds that Congress did not intend that the veteran should have such super-seniority rights. He added that until the Supreme Court passes on the question, employers may be subjected to liability whichever policy they adopt.

O. D. T. Information Division Terminated

The Division of Information of the Office of Defense Transportation was terminated effective May 4, and Benjamin P. Adams, who had been acting director of the division since December, 1945, has become regional director of information of the Civilian Production Administration with headquarters at New York.

Before coming to O. D. T. in June, 1944, Mr. Adams had done information work for the Argentine government in Buenos Aires,

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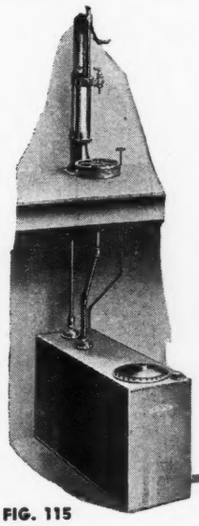

FIG. 115

Recommended for Pit or Cellar Installation.

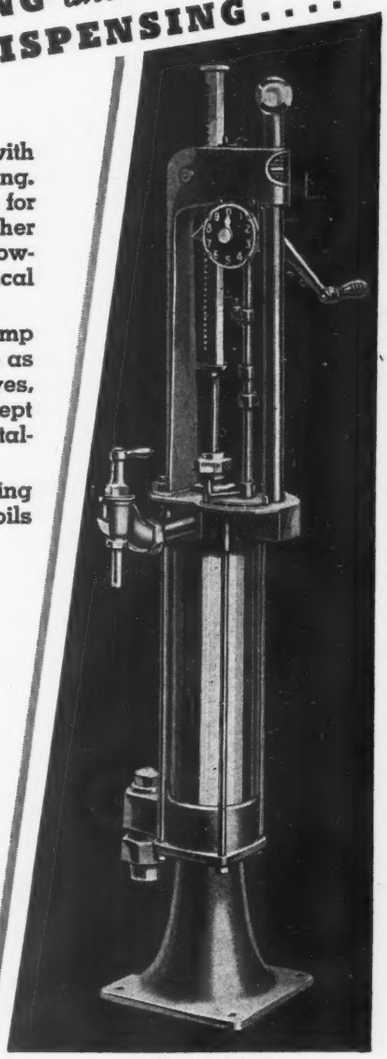

FIG. 41 PUMP

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the Federal Reserve Board and the 1936 World Power Conference. He was a member of the editorial staff of the former Literary Digest from 1909 to 1934.

P. A. W. Terminated

The Petroleum Administration for War, which was established in December, 1942, was terminated May 6 by an executive order issued by President Truman. The order directed Secretary of Interior Krug to wind up P. A. W. affairs and the President also requested the secretary to unify and coordinate federal policy and administration with respect to petroleum.

Responding to the request Mr. Krug announced on May 6 that he was establishing an Oil and Gas Division in the Interior Department. Ralph K. Davies, former deputy petroleum administrator for war, Mr. Krug said, would "remain with the government for a short period to provide executive direction for the new division during its formative stages."

Lower Coal Rate to Youngstown Effective June 1

The Interstate Commerce Commission has authorized the railroads involved to make effective June 1 on one day's notice the lower rates prescribed in the No. 28825 proceedings on all-rail coal from the Pittsburgh, Freeport and Leetonia districts in Pennsylvania, and on ex-river coal from Conway, Pa., and Colona, to the Youngstown, Ohio, steel producing district. The authorization came in a May 2 order by Commissioner Aitchison.

The effective date of the original order of October 2, 1945, which prescribed the lower rates, had previously been postponed because of court proceedings, the latest of such postponements (from May 1 until June 1) having been noted in the *Railway Age* of April 20, page 837.

Unveil Plaque to Americans

In tribute to the part played by the Southern of Great Britain and its employees in transporting 3,500,000 American military personnel to camps in Britain and continental battlefronts, a bronze plaque has been placed on one of the gates of the Southampton docks by the U. S. port commander and his staff.

"This tablet was presented to the Southern Railway by the 14th Major Port, United States Army," the plaque reads, "in proud and glorious memory of the men and women of the forces of the United Nations who sailed from this port during the great war against aggression to secure the freedom of mankind." It bears the signature of Colonel Sherman L. Kiser, port commander, and the name of Colonel Leo J. Meyer, deputy port commander.

A total of 4,500,000 service men and women passed through the port during the war years, and nearly 5,000,000 tons of military stores and equipment were dispatched to the war fronts, according to British Railways headquarters in New York.

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